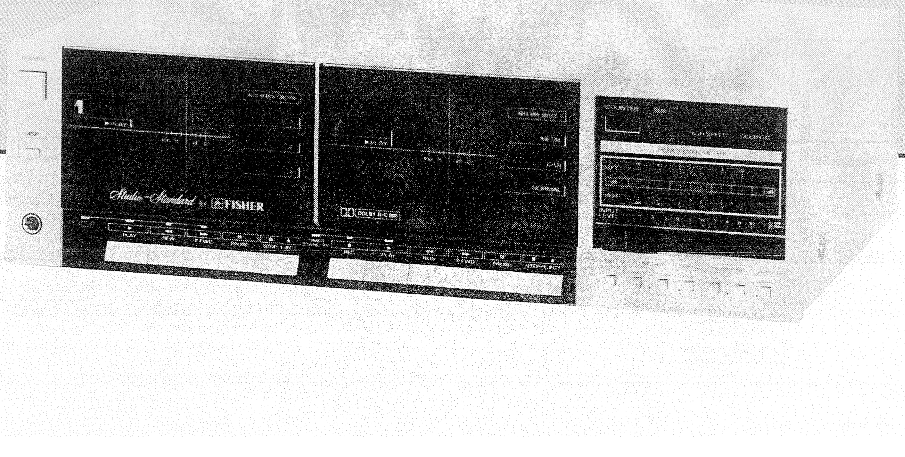
SERVICE MANUAL

FISHER

CR-W77

Stereo Double Cassette Deck

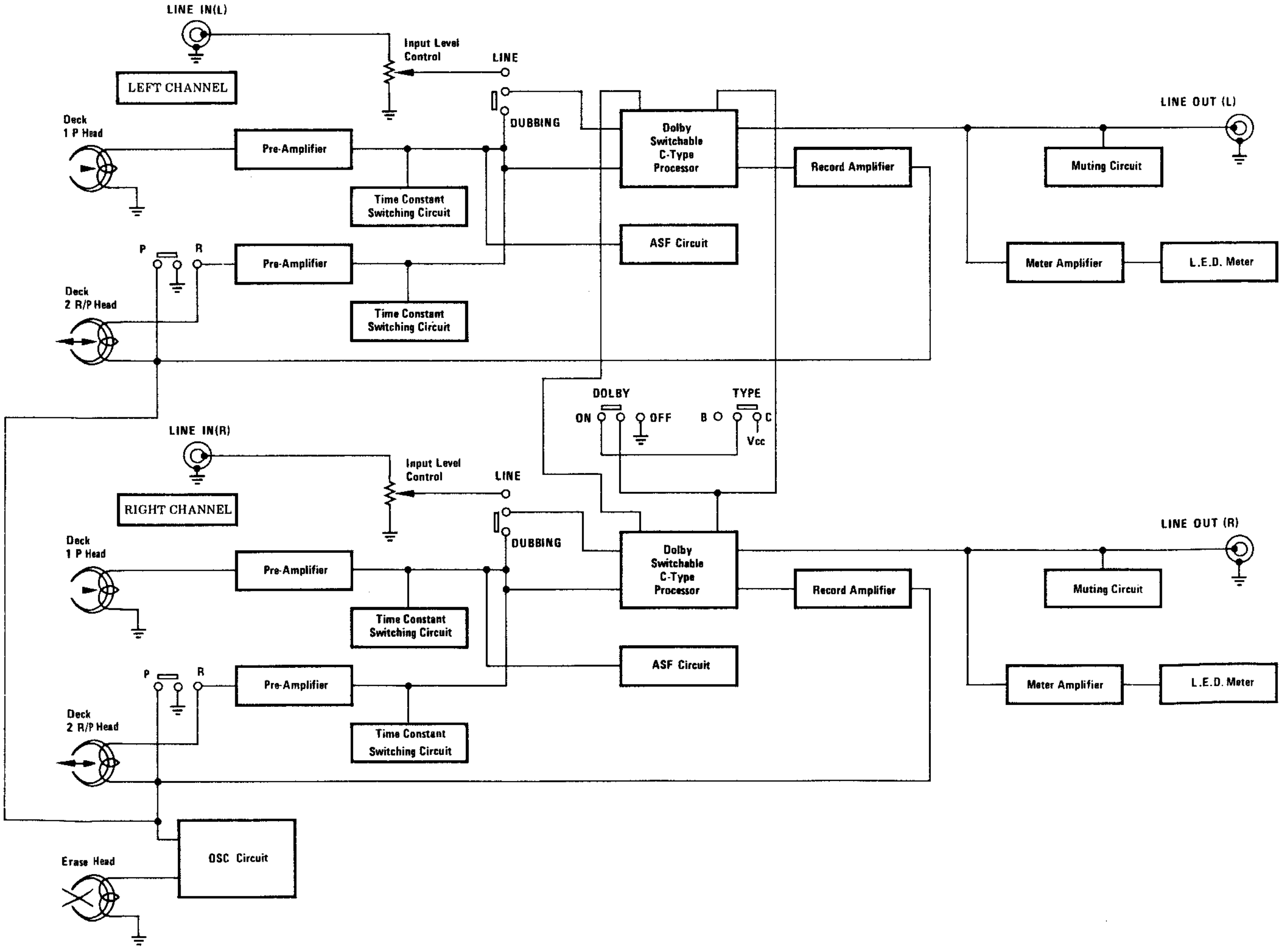
(EUROPE)



CONTENTS

Functional Block Diagram 2
Specifications 3
IC Signal Flow & Equivalent Circuit 4,5
Cabinet & Chassis Exploded View 6
Parts List 7
Cassette Deck Electrical Adjustment 8,9,10
Deck 1 Mechanism Exploded View 11,12
Deck 1 Mechanism Parts List 13
Deck 2 Mechanism Exploded View 14,15
Deck 2 Mechanism Parts List 16
Printed Circuit Board (Bottom View) 17,18,19,20,21,22
Parts List 23,24,25,26,27,28
Point to Point Wiring Diagram 29,30
Schematic Diagram 31,32
Semiconductor Lead Identification 33

FUNCTIONAL BLOCK DIAGRAM



LINE IN(L)
LEFT CHANNEL
Input Level Control
LINE
DUBBING
Deck 1 P Head
Pre-Amplifier
Time Constant Switching Circuit
P
R
Deck 2 R/P Head
Pre-Amplifier
Time Constant Switching Circuit
Dolby Switchable C-Type Processor
ASF Circuit
Record Amplifier
LINE OUT (L)
Muting Circuit
Meter Amplifier
L.E.D. Meter
DOLBY
ON
OFF
TYPE
B
C
Vcc
LINE IN(R)
RIGHT CHANNEL
Input Level Control
LINE
DUBBING
Deck 1 P Head
Pre-Amplifier
Time Constant Switching Circuit
P
R
Deck 2 R/P Head
Pre-Amplifier
Time Constant Switching Circuit
Dolby Switchable C-Type Processor
ASF Circuit
Record Amplifier
LINE OUT (R)
Muting Circuit
Meter Amplifier
L.E.D. Meter
Erase Head
OSC Circuit

SPECIFICATIONS

CASSETTE DECK	CR-W77
Motor	(2) DC Governor
Cassette Loading	(2) Front
Drive System	(2) Capstan
Number of Heads	2/2
Head Material	Hard Permalloy/Ferrite
Operation	(2) Powered Mechanism
Wow & Flutter	0.06 % WRMS
Signal-to-Noise Ratio (CCIR Weighted)	
Dolby Off	52 dB
Dolby On B	60 dB
Dolby On C	70 dB
Erase Ratio	70 dB
Channel Separation	40 dB
Signal Crosstalk	70 dB
Frequency Response	
Normal Tape (±3 dB)	30 Hz – 14 kHz
CrO_2 Equivalent Tape (±3 dB)	30 Hz – 15 kHz
Metal Tape (±3 dB)	30 Hz – 15 kHz
Total Hormonic Distortion	
at 0 VU	1.5 %
Fast Forward/Rewind Time	
(C-60)	100 sec.
Level Indicators	(2) L.E.D. Meters
Inputs (Sensitivity/Impedance)	(2) Line 70 mV/50 kΩ
Output (Level at 0 VU/Impedance)	(2) Line 500 mV/5 kΩ
Tape 1 and 2 Select Buttons	Normal, CrO_2, Metal
Tape counter	Mechanical
Power Requirements	AC 120/220 V 50 Hz
Power Consumption	23 W
Dimensions (W x H x D)	400 x 112 x 255 mm
Weight (approx.)	4.5 kg

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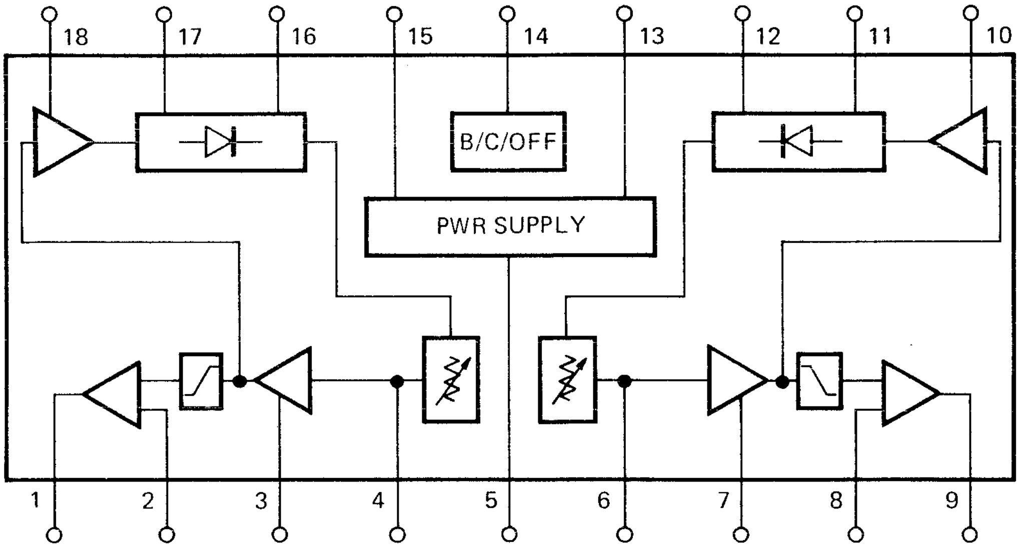
Because its products are subject to continuous improvement, Fisher Corporation reserves the right to modify product designs and specifications without notice and without incurring any obligation.

DOLBY IC NE652 BLOCK DIAGRAM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B/C/OFF
PWR SUPPLY
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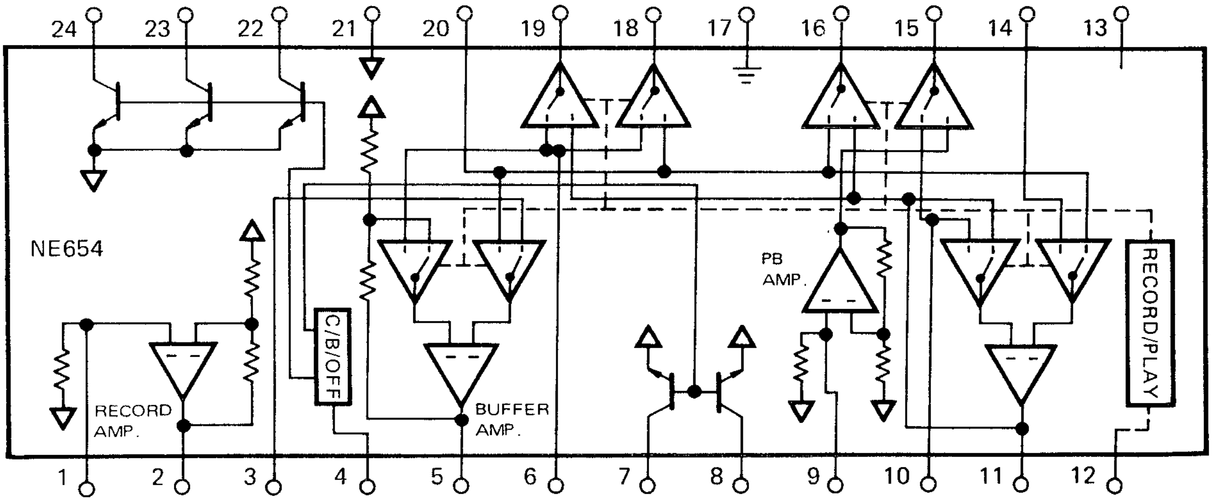
DOLBY IC NE654 BLOCK DIAGRAM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NE654
RECORD AMP.
C/B/OFF
BUFFER AMP.
PB AMP.
RECORD/PLAY
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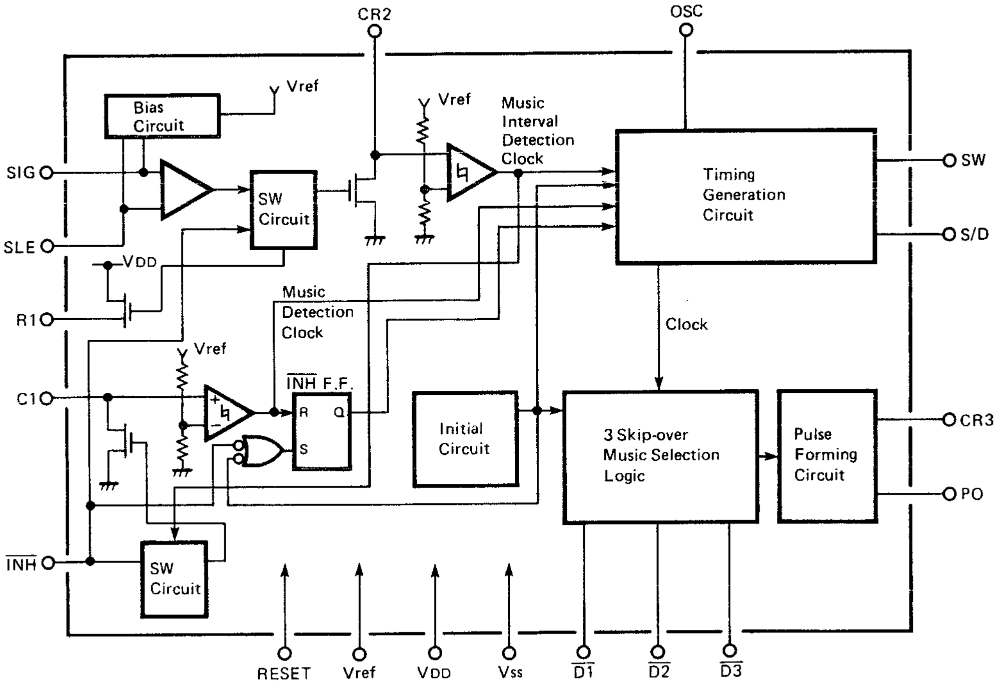
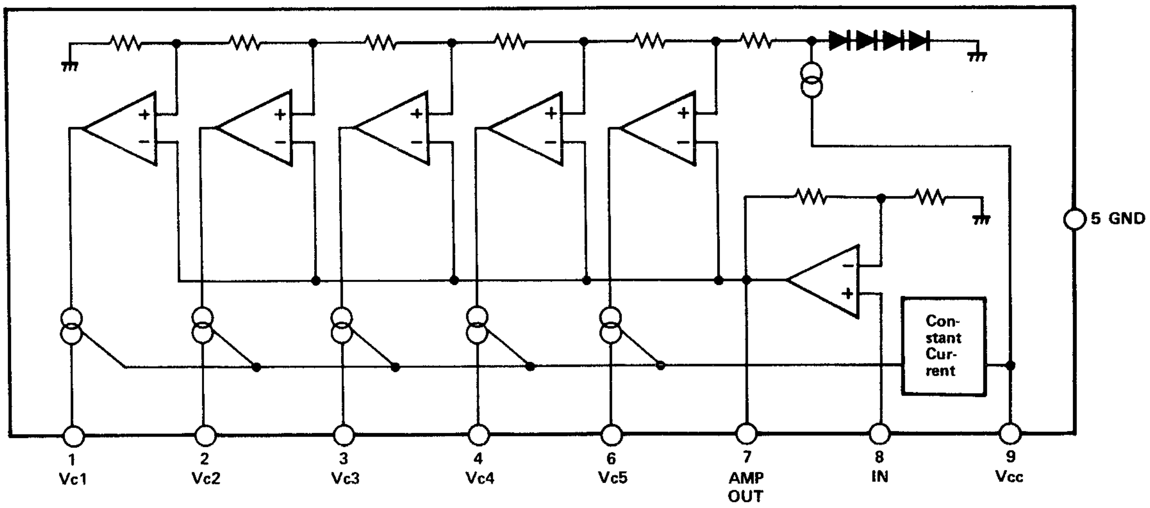
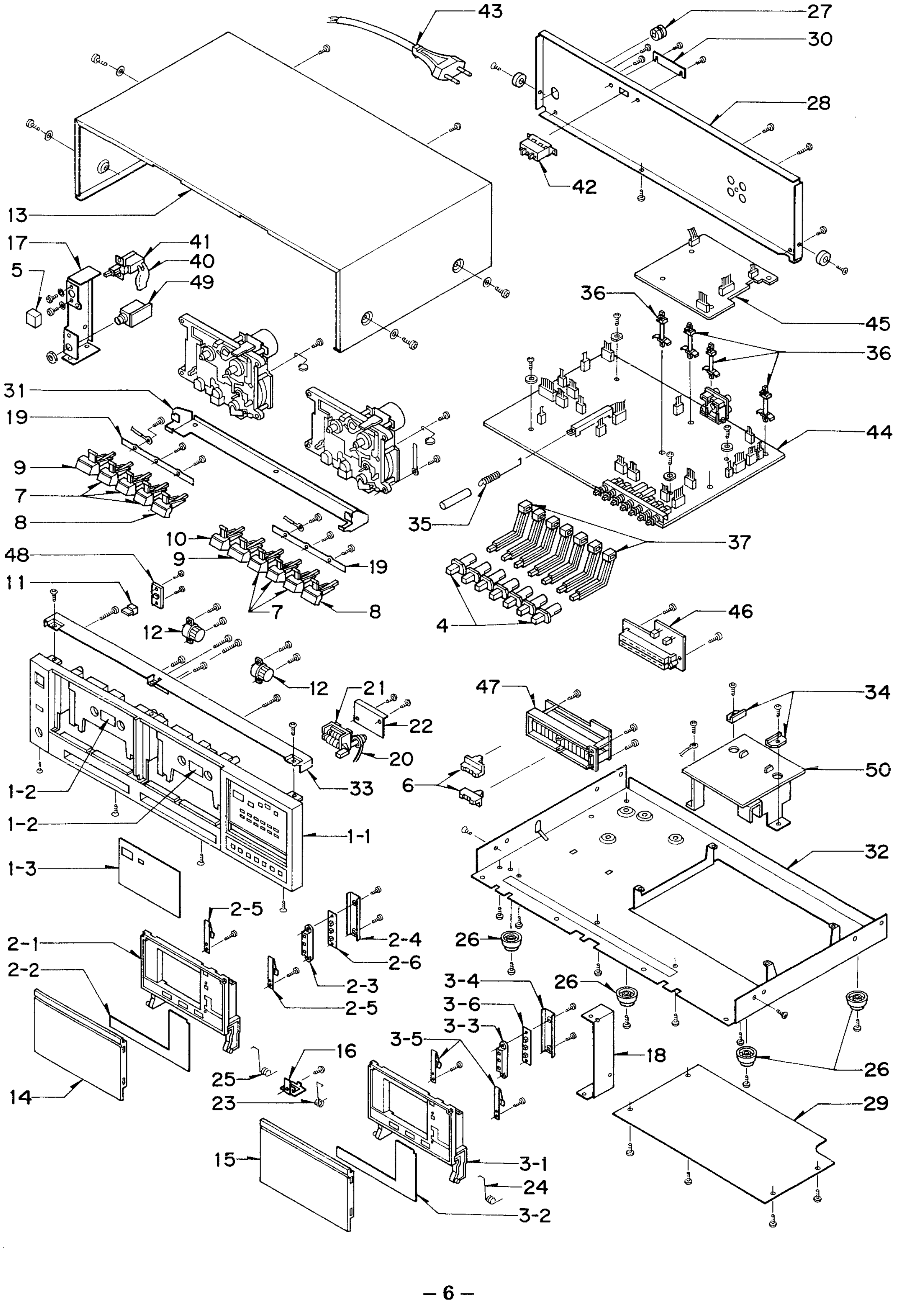
ASF IC LC7510 BLOCK DIAGRAM


CR2
OSC
Vref
Bias Circuit
Vref
Music Interval Detection Clock
SIG
SLE
VDD
R1
C1
INH
SW Circuit
Timing Generation Circuit
SW
S/D
Clock
Music Detection Clock
Vref
INH F.F.
R
Q
S
Initial Circuit
3 Skip-over Music Selection Logic
Pulse Forming Circuit
CR3
PO
SW Circuit
RESET
Vref
VDD
Vss
D1
D2
D3

METER IC BA6124 BLOCK DIAGRAM


5 GND
Con-stant Cur-rent
1 Vc1
2 Vc2
3 Vc3
4 Vc4
6 Vc5
7 AMP OUT
8 IN
9 Vcc

CABINET & CHASSIS EXPLODED VIEW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3-2

PARTS LIST

Ref. No.	Part No.	Description	Q'ty
	PACKEGE		
	141 6 1139 89402	Box Corrugate EXP	1
	141 6 1449 85500	Case Styrofoam L	1
	141 6 1449 85600	Case Styrofoam R	1
	141 6 1449 91400	Pad	1
	141 6 2519 09790	Poly Cover	1
	141 6 4559 03200	Serial No Sheet	3
	ACCESSORIES		
	131 0 4004 15200	Wire Shield Assy	1
	131 0 4004 15201	Wire Shield Assy	1
	131 6 4519 15700	Guarantee Certificate	1
	131 6 2719 10801	Bag Fan	1
	141 6 4559 03200	Serial No Sheet	1
	142 6 4119 31794	Instruction Book	1
	CABINET		
1	141 0 1119 96801	Panel Front Assy	1
1-1	141 2 1119 94301	Panel Front	1
1-2	141 2 1519 12200	Reflection	2
1-3	141 2 1439 12001	Sheet	1
2	141 0 1249 26400	Lid Cassette Assy	1
2-1	141 2 1249 38300	Lid Cassette	1
2-2	141 2 2419 29100	Sheet	1
2-3	141 2 3749 09300	Shelter	1
2-4	141 2 2419 29200	Cover L.E.D.	1
2-5	141 2 8539 49300	Spring Cassette Hold	2
2-6	141 0 1939 01120	ASF L.E.D. PC Assy	1
	4 2359 76059	Connector 4P Assy	1
D301	4 2029 72730	L.E.D., TLR 209	1
D302	4 2029 72730	L.E.D., TLR 209	1
D303	4 2029 72730	L.E.D., TLR 209	1
3	141 0 1249 26401	Lid Cassette Assy	1
3-1	141 2 1249 38300	Lid Cassette	1
3-2	141 2 2419 29100	Sheet	1
3-3	141 2 3749 09300	Shelter	1
3-4	141 2 2419 29200	Cover L.E.D.	1
3-5	141 2 8539 49300	Spring Cassette Hold	2
3-6	141 0 1939 01130	Tape Select L.E.D. Assy	1
	4 2359 76058	Connector 4P Assy	1
D301	4 2029 72731	L.E.D., TLG 209	1
D302	4 2029 72732	L.E.D., TLY 209	1
D303	4 2029 72730	L.E.D., TLR 209	1
4	131 2 1601 69600	Knob	7
5	131 2 1601 83700	Knob (POWER)	1

Ref. No.	Part No.	Description	Q'ty
6	141 2 1649 19400	Knob (VOLUME)	2
7	141 2 1659 08400	Knob Select (FF,REW,PAUSE)	6
8	141 2 1659 08500	Knob Select (STOP)	2
9	141 2 1659 08600	Knob Select (Play)	2
10	141 2 1659 08700	Knob Select (REC)	1
11	141 2 1659 14600	Knob	1
12	141 0 5519 07902	Gear Eject Assy	2
13	141 2 1119 83800	Cover	1
14	141 2 1319 28001	Lid Cassette Clear	1
15	141 2 1319 28002	Lid Cassette Clear	1
16	141 2 2149 19401	Support Lid Cassette	1
17	141 2 2149 20900	Bracket Front	1
18	141 2 2149 21000	Bracket Front	1
19	141 2 3519 64200	Plate Knob	2
20	141 2 5649 04300	Belt Counter	1
21	141 2 8119 12600	Counter	1
22	141 2 8139 10700	Bracket Counter	1
23	141 2 8549 18800	Spring Cassette-up (L)	1
24	141 2 8549 18900	Spring Cassette-up (R)	1
25	141 2 8549 23100	Spring Cassette-up	1
26	131 2 1801 12900	Leg	4
27	131 2 6111 14200	Bushing (4N-4)	1
28	141 2 1219 22910	Rear Panel	1
29	141 2 1259 05300	Sheet Cabinet	1
30	141 2 2419 28700	Sheet Cover	1
31	141 2 2529 06300	Bracket Chassis	1
32	141 2 3119 18901	Chassis Cabinet	1
33	141 2 3159 03400	Frame Front	1
34	141 2 3719 05500	Fix Trans	2
35	141 2 8549 19100	Spring	1
36	141 2 7539 40800	Pole	4
37	141 2 6129 06000	Rod Connection	7
	ELECTRICAL		
40 ⚠	4 2239 70970	Capacitor 0.01μF 400V	1
41 ⚠	4 2312 05030	Switch Push Power	1
42 ⚠	4 2319 72140	Switch Slide	1
43 ⚠	4 2439 70352	Line Cord	1
44	141 0 1939 01060	Main Amp P.C.B. Assy	1
45	141 0 1939 01070	Dolby Unit P.C.B. Assy	1
46	141 0 1939 01080	L.E.D. Meter PC Assy	1
47	141 0 1939 01090	REC Volume P.C.B. Assy	1
48	141 0 1939 01100	ASF Select Switch P.C.B. Assy	1
49	141 0 1939 01110	Head Phone P.C.B. Assy	1
50	141 0 1939 01160	Power Supply P.C.B. Assy	1

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.
Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

CASSETTE DECK ELECTRICAL ADJUSTMENT

CLEANING AND DEMAGNETIZATION OF THE HEAD

If the tape-contacting surfaces of the parts such as the head, the capstan and the pinch roller are dirty, it results to irregular tape running, imperfect recording and erasing, tone deterioration, and the curling of the tape at the capstan.

- Cleaning Method

1. Remove the Cassette Lid. (Fig. 1)
2. Wipe the head, the capstan, and the pinch roller clean with a cleaning cotton swab. If they are extremely dirty, use a cotton swab moistened in absolute alcohol or cleaning liquid.
3. Insert the head cover.

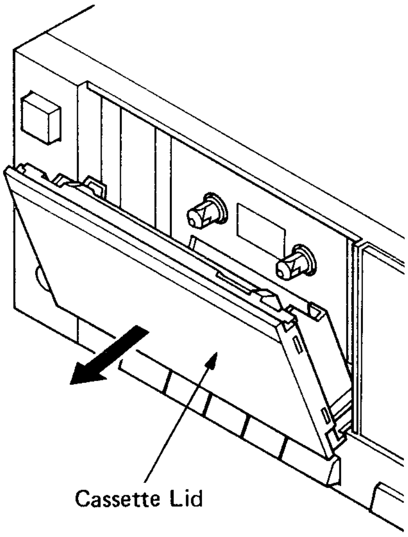


Fig. 1

Pull out the Cassette Lid in the direction of the arrow.

- Head Demagnetization

  The head is magnetized after long usage and it results to noise and tone deterioration. Therefore, demagnetize the head with a demagnetizer. Be sure to turn off the power source.

TAPE SPEED ADJUSTMENT

Play back a 3 kHz test tape (Example: TEAC MTT-111 or its equivalent) and adjust the speed adjusting volume inside the motor to obtain the playback frequency of 3000 – 3015 Hz. (Fig. 2)

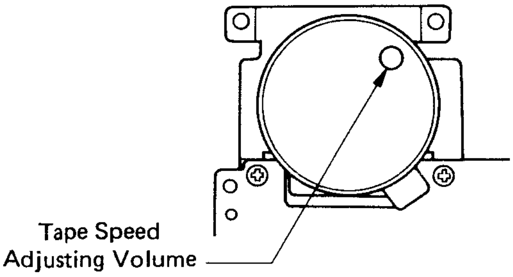


Fig. 2

HEAD AZIMUTH ADJUSTMENT

1. Play back the test tape (Example: TEAC MTT-155C 10 kHz/ 333 Hz) to adjust the head azimuth. Observe the output wave forms of the LEFT and RIGHT channels. First of all, play back the 10 kHz signal. Turn the azimuth adjusting screw for the R/P Head until the phase of the Left Right channels becomes identical and their output levels are maximized. Then, play back the 333 Hz signal and check to see that the phase is identical to the phase of the 10 kHz signal. If necessary, repeat the adjustment. (Figs. 3, 4)

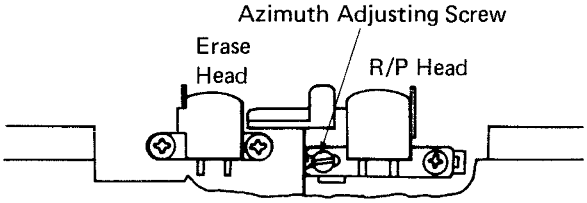
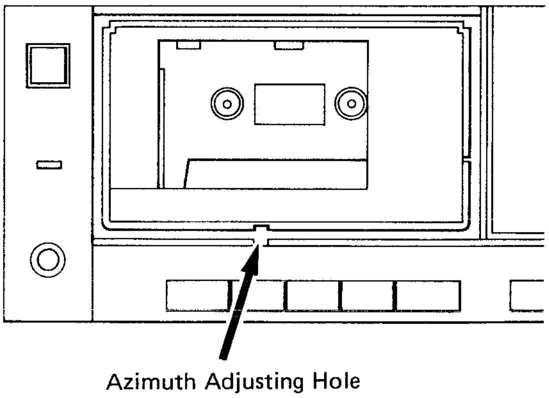


Fig. 3



Insert a screwdriver into this hole and perform the adjustment.

Fig. 4

PLAYBACK GAIN ADJUSTMENT

1. Set the Dolby Switch to "OFF", and the Tape Select Switch to "AUTO".
2. Play back a test tape (Example: TEAC MTT-150) with DECK 1 and connect the AC VTVM to LINE OUT (L). Adjust VR102, so that the output becomes 620 mV.
3. Connect the AC VTVM to LINE OUT (R) and adjust VR202, so that the output becomes 620 mV.
4. Play back the test tape with DECK 2 and adjust VR103 and VR203, so that the outputs of both LINE OUTS becomes 620 mV.

LEVEL METER ADJUSTMENT

1. Set DECK 2 in the recording mode and apply the signal of 1 kHz at –15 dBs to LINE IN.
2. Adjust the input volume, so that the output of LINE OUT becomes 620 mV, – 1dB.
3. Adjust VR105 and VR205, so that the area over the mark "0" on the LED meter is half lit.

BIAS ADJUSTMENT

1. Set DECK 2 in the recording mode and the input volume to the maximum one.
   Apply the signal of 1 kHz at – 43 dBs through LINE IN.
2. Connect the AC VTVM to LINE OUT and set the Tape Select Switch to "AUTO". Record the signal on the normal tape (AC223).
3. Change the input signal to 12.5 kHz. Adjust VR104 and VR204, so that the output deviation between the 1 kHz and 12.5 kHz signals becomes 0 dB±1 dB.
4. Record the chrome tape (AC512) and play it back. Insert the RT pin for chrome to the place where the output deviation between the 1 kHz and 12.5 kHz signals becomes 0 dB±1 dB.
5. Record the metal tape (AC711) and play it back. Insert the RT pin for metal as described in item 4.

BIAS LEAKAGE ADJUSTMENT

1. Set the Tape Select Switch to "METAL".
2. Connect the AC VTVM's to TP1 and TP2. Also, connect the frequency counter to TP1.
3. Turn the OSC transformer until the frequency counter indicates 105 kHz. Then, adjust the voltages of TP1 and TP2 at around 105 kHz, so that the same values are obtained.

RECORDING SENSITIVITY ADJUSTMENT

1. Set the Tape Select Switch to "AUTO" and load DECK 2 with a normal tape (Example: AC-223).
2. Set DECK 2 in the recording mode and apply the signal of 1 kHz at –15 dBs through LINE IN. Then, adjust the input volume, so that the output of LINE OUT becomes 620 mV.
3. Play back the signal recorded in the above condition and adjust VR106 and VR206, so that the output becomes 620 mV.

DOUBLE SPEED ADJUSTMENT

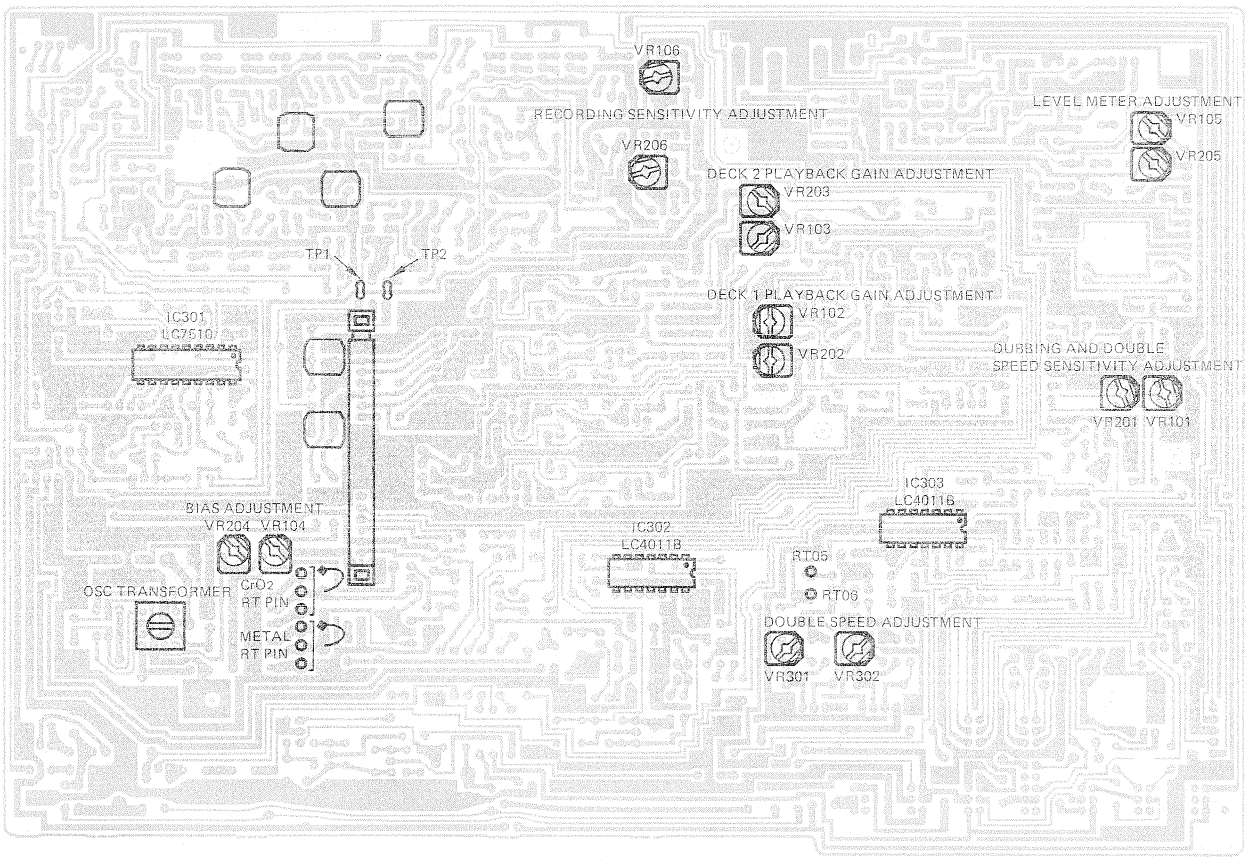
1. Short RT05 and RT06, so that the tapes on both DECK 1 and DECK 2 can be played back at double the normal speed.
2. Load DECK 1 with a 3 kHz test tape (Example: TEAC MTT-111) and play it back.
   Then, adjust VR301, so that the frequency of LINE OUT becomes 6,000 – 6,015 Hz.
3. Adjust VR302 for DECK 2 in the same method as described above.

DUBBING AND DOUBLE SPEED SENSITIVITY ADJUSTMENT

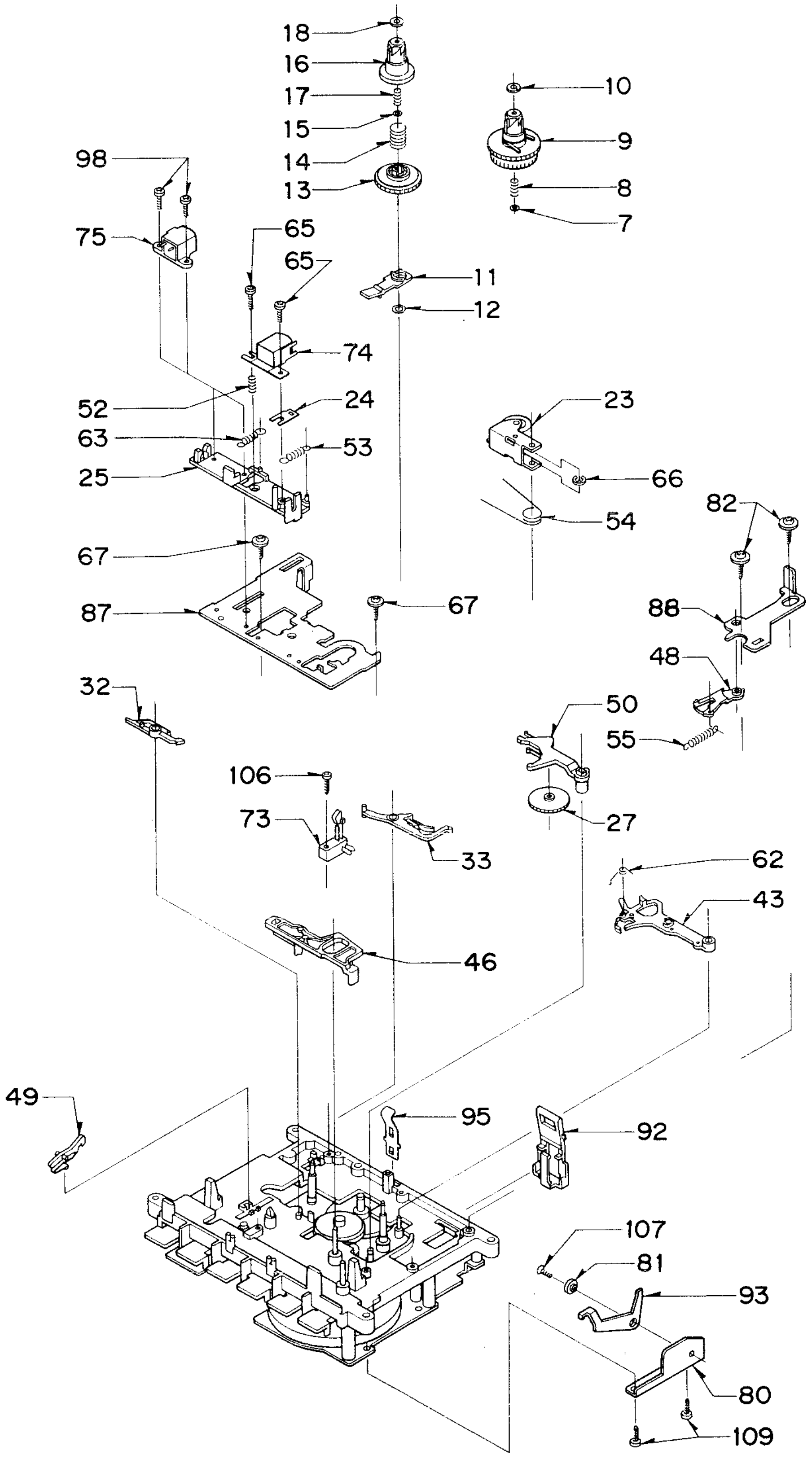
1. Set the SYNCHRO Switch to "DUBBING"
2. Load DECK 1 with a test tape (Example: TEAC MTT-150) and set DECK 1 in the playback mode.
3. Set DECK 2 in the recording mode and adjust VR101 and VR201, so that the output of LINE OUT becomes 620 mV.

MAIN AMP P.C.BOARD ALIGNMENT POINTS

(TOP VIEW)


VR106
RECORDING SENSITIVITY ADJUSTMENT
VR206
LEVEL METER ADJUSTMENT
VR105
VR205
DECK 2 PLAYBACK GAIN ADJUSTMENT
VR203
VR103
TP1
TP2
DECK 1 PLAYBACK GAIN ADJUSTMENT
VR102
VR202
IC301
LC7510
DUBBING AND DOUBLE
SPEED SENSITIVITY ADJUSTMENT
VR201 VR101
IC303
LC4011B
BIAS ADJUSTMENT
VR204 VR104
IC302
LC4011B
RT05
OSC TRANSFORMER
CrO2
RT PIN
RT06
DOUBLE SPEED ADJUSTMENT
METAL
RT PIN
VR301 VR302

DECK1 MECHANISM EXPLODED VIEW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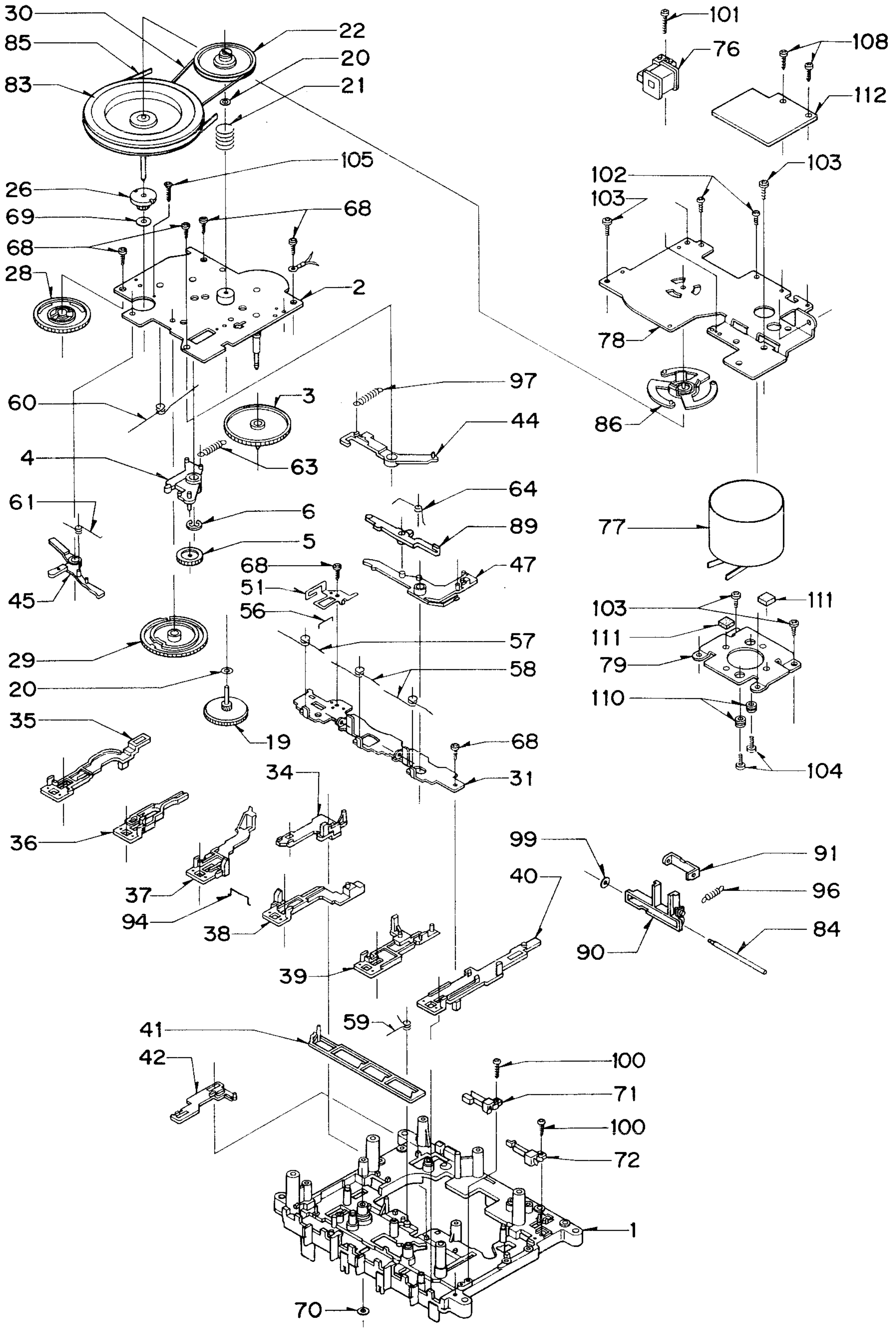
DECK1 MECHANISM EXPLODED VIEW (Continued)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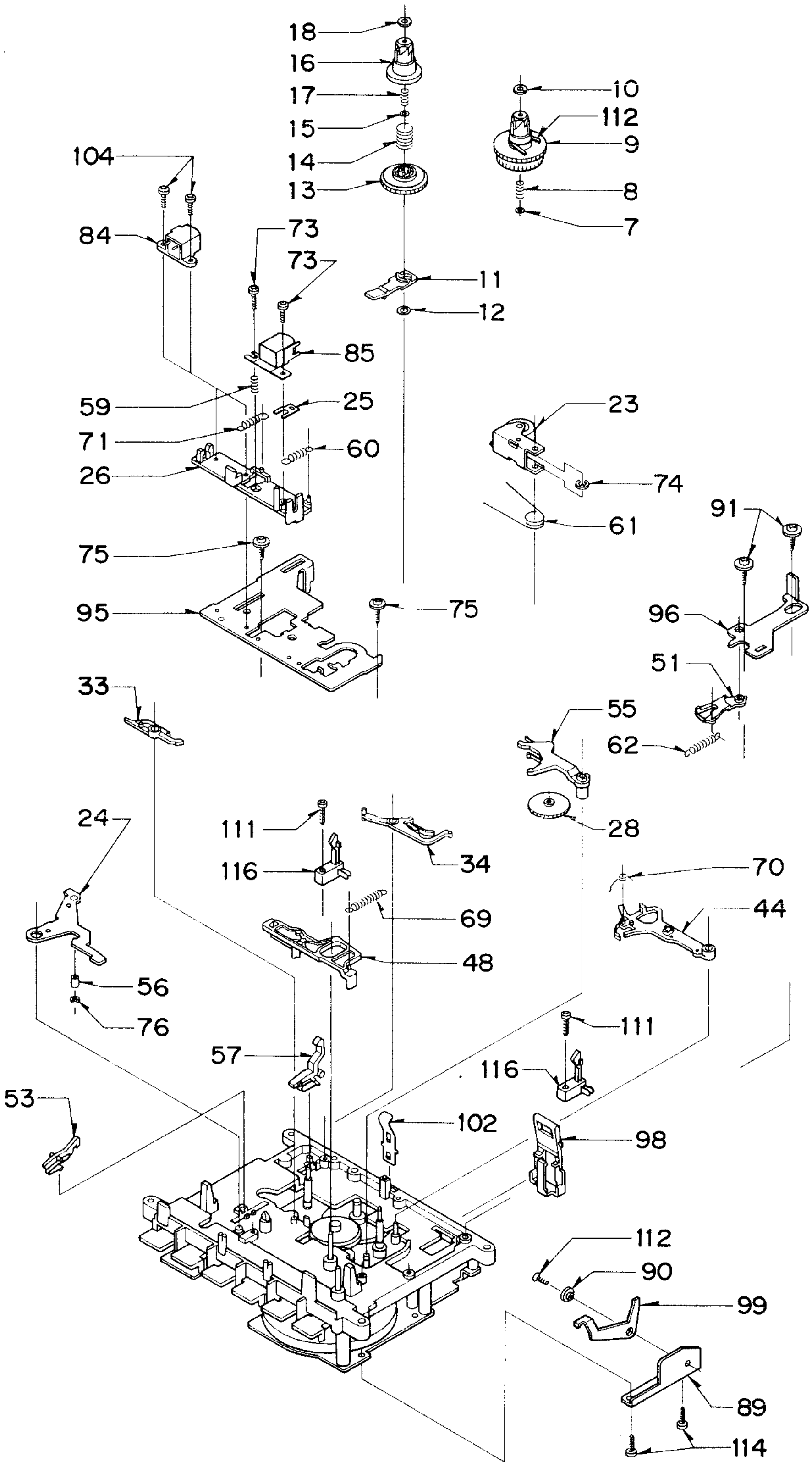
DECK 1 MECHANISM PARTS LIST

Ref. No.	Part No.	Description		Q'ty
	MECHANISM			
1	141 0 3119 21900	Chassis Assy		1
2	141 0 3119 21800	Plate Chassis Assy		1
3	141 2 5519 45600	Gear ASO		1
4	141 2 7439 30000	Arm Fastwind		1
5	141 2 5519 45100	Gear Fastwind		1
6	112 3 1303 00082	E Ring	M3.0	1
7	141 2 4539 27601	Washer		1
8	141 2 8559 00100	Spring Supply		1
9	141 2 5319 11500	Gear Reel Take-up		1
10	141 2 4539 15700	Washer		1
11	141 2 7419 80200	Lever Rewind		1
12	141 2 4539 28001	Washer		1
13	141 2 5319 11600	Gear Reel Supply		1
14	141 2 8519 67900	Spring Reel		1
15	141 2 4539 27601	Washer		1
16	141 2 5319 11700	Fin Reel Supply		1
17	141 2 8559 00100	Spring Supply		1
18	141 2 4539 15700	Washer		1
19	141 0 5519 09600	Friction Assy		1
20	141 2 4539 27601	Washer		2
21	141 2 8559 04700	Spring Pulley		1
22	141 2 5519 45700	Pulley Friction		1
23	141 0 5419 02201	Pinchroller Assy		1
24	141 2 3529 18102	Spacer Head		1
25	141 2 3529 35900	Speacer Head		1
26	141 2 5519 45200	Gear Flywheel		1
27	141 2 5519 45300	Gear Take-up		1
28	141 2 5519 45800	Gear Actuate Pause		1
29	141 2 5519 45900	Gear Actuate Play		1
30	141 2 5649 21200	Belt Wind		1
31	141 2 6139 14300	Frame Rod		1
32	141 2 7149 05600	Brake Supply Reel		1
33	141 2 7149 05700	Brake Take-up Reel		1
34	141 2 7319 52900	Rod Switch		1
35	141 2 7319 53000	Rod Stop		1
36	141 2 7319 53100	Rod Pause		1
37	141 2 7319 53200	Rod Fastwind		1
38	141 2 7319 53300	Rod Rewind		1
39	141 2 7319 53400	Rod Play		1
40	141 2 7319 53500	Rod Record		1
41	141 2 7319 53600	Plate Lock		1
42	141 2 7319 54900	Rod ASO		1
43	141 2 7419 80100	Lever ASO		1
44	141 2 7419 80500	Lever Play Start		1
45	141 2 7419 80600	Lever Pause Start		1
46	141 2 7419 80700	Lever Base Slide		1
47	141 2 7419 81000	Lever Stop Record		1
48	141 2 7419 81100	Lever Stop Eject		1
49	141 2 7419 81300	Lever Cassette		1
50	141 2 7439 30100	Arm Take-up		1
51	141 2 8539 46700	Spring Plate Lock		1
52	141 2 8559 00201	Spring Head		1
53	141 2 8549 18700	Spring Slide Base		1
54	141 2 8529 12500	Spring Pinchroller		1
55	141 2 8549 18500	Spring Eject		1
56	141 2 8529 12800	Spring Pause Latch		1
57	141 2 8529 12400	Spring Rod		1
58	141 2 8529 12401	Spring Rod FF		2
59	141 2 8529 12600	Spring Gear ACT Play		1
60	141 2 8529 12700	Spring Arm FF		1
61	141 2 8529 13300	Spring Lever Pause		1
62	141 2 8529 13200	Spring Sensor		1
63	141 2 8519 64900	Spring Arm Gear		2
64	141 2 8529 14200	Spring Stop Record		1
65	141 2 4219 30300	Screw +BMS M2X6		2
66	112 3 1302 00082	E Ring	M2.0	1
67	141 2 4219 13201	Screw Washer		2
68	143 3 1702 00618	Screw, Bind Hd. Tapping-B	+M2.0x6	6
69	141 2 4539 20900	Washer		1
70	141 2 4539 17600	Washer		1
71	4 2319 71863	Leaf Switch		1
72	4 2319 74550	Leaf Switch		1
73	4 2319 75860	Leaf Switch		1
74	4 2429 72480	Play Head		1
75	4 2429 72360	Dummy Erase Head		1
76	4 2649 70344	Plunger		1
77	4 5279 71236	Motor		1
78	141 2 3519 61400	Support Flywheel		1
79	141 2 3519 61502	Bracket Motor		1
80	141 2 3519 68500	Bracket Eject		1
81	141 2 3529 16000	Spacer Lever Select		1
82	141 2 4219 05400	Screw Washer		2
83	141 2 5219 15000	Flywheel Capstan		1
84	141 2 5529 17000	Spindle Lever		1
85	141 2 5619 02000	Belt		1
86	141 2 5739 06100	Thrust Flywheel		1
87	141 2 7319 52801	Base Slide		1
88	141 2 7319 59200	Plate Eject		1
89	141 2 7419 80800	Lever SW Cue Review		1
90	141 2 7419 81500	Lever Lock Button		1
91	141 2 7419 82700	Lever Plunger		1
92	141 2 7419 84400	Lock Lid Cassette		1
93	141 2 7419 88900	Lever Eject		1
94	141 2 8529 14300	Spring Seesaw		1
95	141 2 8539 47901	Spring Cassette		1
96	141 2 8549 04400	Spring Interlock		1
97	141 2 8549 16900	Spring Lever Play		1
98	141 2 4219 30300	Screw +BMS M2X6		2
99	112 3 1301 20082	E Ring	M1.2	1
100	143 3 1702 00818	Screw, Bind Hd. Tapping-B	+M2.0x8	2
101	101 3 1302 00811	Screw, Pan Hd.	+M2.0x8	1
102	103 3 1302 60511	Screw, Pan Hd. Tapping-2	+M2.6x5	2
103	143 3 1702 60818	Screw, Bind Hd. Tapping-B	+M2.6x8	4
104	141 2 4219 30100	Screw		2
105	143 3 1202 00818	Screw, Flat Hd. Tapping-B	+M2.0x8	1
106	143 3 1702 00818	Screw, Bind Hd. Tapping-B	+M2.0x8	1
107	101 3 1201 60611	Screw, Flat Hd.	+M2.6x6	1
108	143 3 1302 60611	Screw, Pan Hd. Tapping-B	+M2.6x6	2
109	143 3 1702 60611	Screw, Bind Hd. Tapping-B	+M2.6x6	2
110	141 2 4459 11800	Cushion Motor		2
111	141 2 4469 21300	Cushion		2
112	141 0 1939 01140	Deck 1 Terminal P.C.B. Assy		1
	4 2359 76355	Connector 3P Assy		1
	4 2359 764020	Connector 2P Assy		1
	4 2359 763910	Connector 4P Assy		1

DECK 2 MECHANISM EXPLODED VIEW


18
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111
116
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34
70
69
44
48
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111
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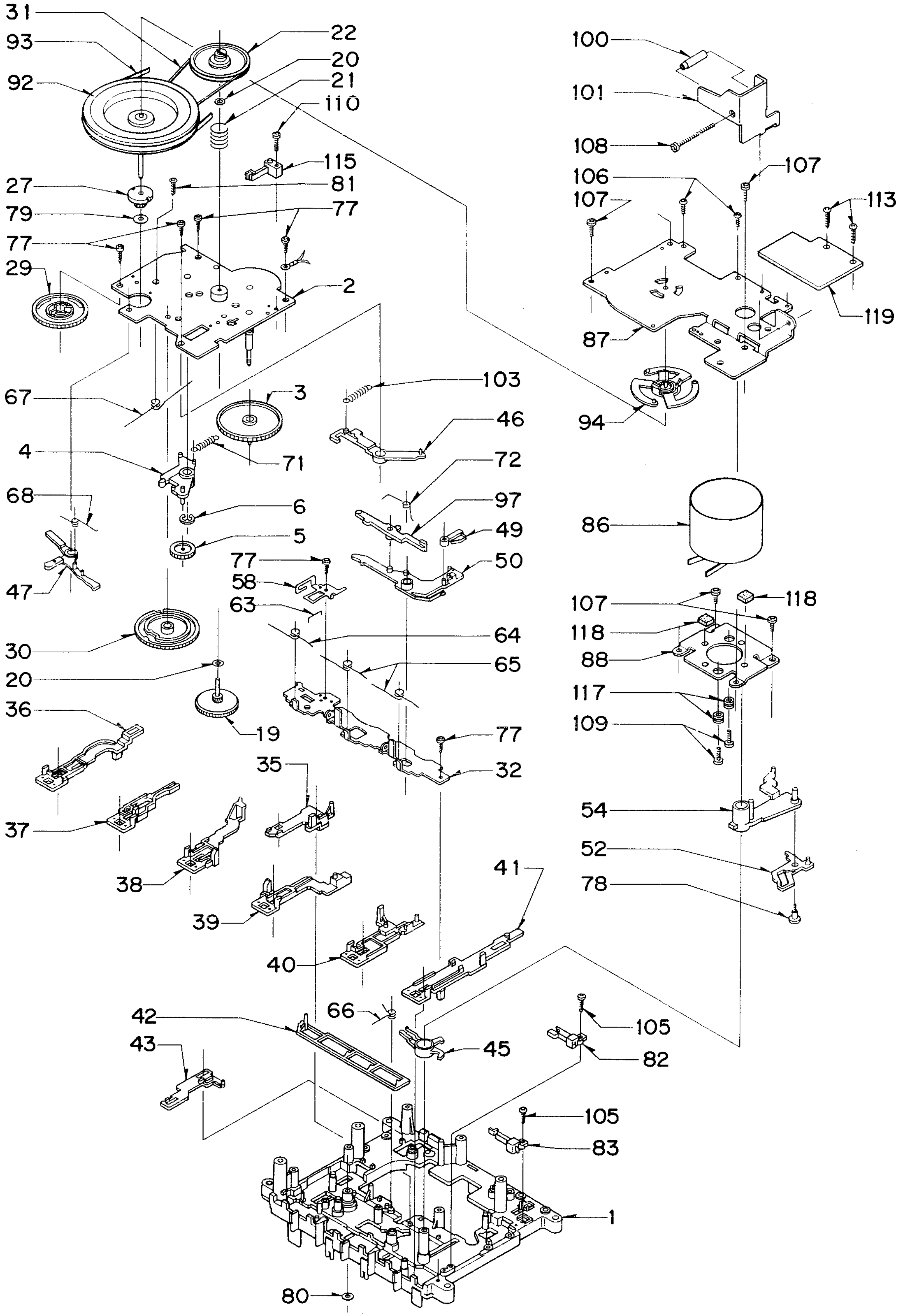
116
53
102
98
112
90
99
89
114

DECK 2 MECHANISM EXPLODED VIEW (Continued)

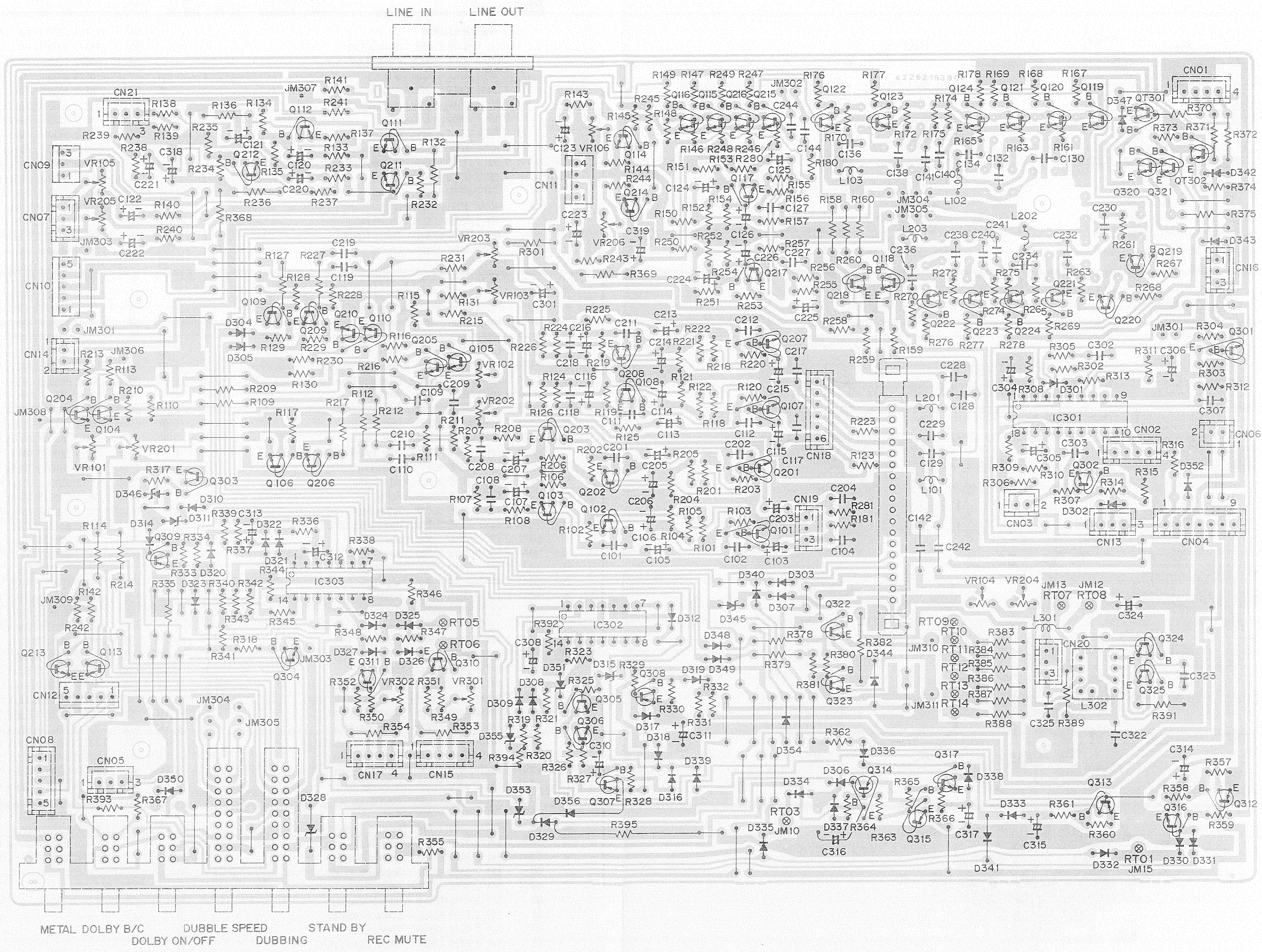


DECK 2 MECHANISM PARTS LIST

Ref. No.	Part No.	Description		Q'ty
	MECHANISM			
1	141 0 3119 21900	Chassis Assy		1
2	141 0 3119 21800	Plate Chassis Assy		1
3	141 2 5519 45600	Gear ASO		1
4	141 2 7439 30000	Arm Fastwind		1
5	141 2 5519 45100	Gear Fastwind		1
6	112 3 1303 00082	E Ring	M3.0	1
7	141 2 4539 27601	Washer		1
8	141 2 8559 00100	Spring Supply		1
9	141 2 5319 11500	Gear Reel Take-up		1
10	141 2 4539 15700	Washer		1
11	141 2 7419 80200	Lever Rewind		1
12	141 2 4539 28001	Washer		1
13	141 2 5319 11600	Gear Reel Supply		1
14	141 2 8519 67900	Spring Reel		1
15	141 2 4539 27601	Washer		1
16	141 2 5319 11700	Fin Reel Supply		1
17	141 2 8559 00100	Spring Supply		1
18	141 2 4539 15700	Washer		1
19	141 0 5519 09600	Friction Assy		1
20	141 2 4539 27601	Washer		2
21	141 2 8559 04700	Spring Pulley		1
22	141 2 5519 45700	Pulley Friction		1
23	141 0 5419 02201	Pinchroller Assy		1
24	141 0 7419 36900	Lever REC Base Assy		1
25	141 2 3529 18102	Spacer Head		1
26	141 2 3529 35900	Spacer Head		1
27	141 2 5519 45200	Gear Flywheel		1
28	141 2 5519 45300	Gear Take-up		1
29	141 2 5519 45800	Gear Actuate Pause		1
30	141 2 5519 45900	Gear Actuate Play		1
31	141 2 5649 21200	Belt Wind		1
32	141 2 6139 14300	Frame Rod		1
33	141 2 7149 05600	Brake Supply Reel		1
34	141 2 7149 05700	Brake Take-up Reel		1
35	141 2 7319 52900	Rod Switch		1
36	141 2 7319 53000	Rod Stop		1
37	141 2 7319 53100	Rod Pause		1
38	141 2 7319 53200	Rod Fastwind		1
39	141 2 7319 53300	Rod Rewind		1
40	141 2 7319 53400	Rod Play		1
41	141 2 7319 53500	Rod Record		1
42	141 2 7319 53600	Plate Lock		1
43	141 2 7319 54900	Rod ASO		1
44	141 2 7419 80100	Lever ASO		1
45	141 2 7419 80400	Lever Lock Record		1
46	141 2 7419 80500	Lever Play Start		1
47	141 2 7419 80600	Lever Pause Start		1
48	141 2 7419 80700	Lever Base Slide		1
49	141 2 7419 80900	Lever SPG Stop REC		1
50	141 2 7419 81000	Lever Stop Record		1
51	141 2 7419 81100	Lever Stop Eject		1
52	141 2 7419 81200	Lever REC Select		1
53	141 2 7419 81300	Lever Cassette		1
54	141 2 7419 81400	Arm Record		1
55	141 2 7439 30100	Arm Take-up		1
56	141 2 8259 11100	Roller REC		1
57	141 2 8419 11700	Interlock Lever		1
58	141 2 8539 46700	Spring Plate Lock		1
59	141 2 8559 00201	Spring Head		1
60	141 2 8549 18700	Spring Slide Base		1
61	141 2 8529 12500	Spring Pinchroller		1
62	141 2 8549 18500	Spring Eject		1
63	141 2 8529 12800	Spring Pause Latch		1
64	141 2 8529 12400	Spring Rod		1
65	141 2 8529 12401	Spring Rod FF		2
66	141 2 8529 12600	Spring Gear ACT Play		1
67	141 2 8529 12700	Spring Arm FF		1
68	141 2 8529 13300	Spring Lever Pause		1
69	141 2 8549 05500	Spring Lever Stop		1
70	141 2 8529 13200	Spring Sensor		1
71	141 2 8519 64900	Spring Arm Gear		2
72	141 2 8529 14200	Spring Stop Record		1
73	141 2 4219 30300	Screw +BMS M2X6		2
74	112 3 1302 00082	E Ring	M2.0	1
75	141 2 4219 13201	Screw Washer		2
76	141 2 4539 17500	Washer		1
77	143 3 1702 00618	Screw, Bind Hd. Tapping-B	+M2.0x6	6
78	141 2 4219 23000	Screw		1
79	141 2 4539 20900	Washer		1
80	141 2 4539 17600	Washer		1
81	143 3 1202 00818	Screw, Flat Hd. Tapping-B	+M2.0x8	1
82	4 2319 71863	Leaf Switch		1
83	4 2319 74550	Leaf Switch		1
84	4 2429 71880	Erase Head		1
85	4 2429 72490	R/P Head		1
86	4 5279 71236	Motor		1
87	141 2 3519 61400	Support Flywheel		1
88	141 2 3519 61502	Bracket Motor		1
89	141 2 3519 68500	Bracket Eject		1
90	141 2 3529 16000	Spacer Lever Select		1
91	141 2 4219 05400	Screw Washer		2
92	141 2 5219 15000	Flywheel Capstan		1
93	141 2 5619 02000	Belt		1
94	141 2 5739 06100	Thrust Flywheel		1
95	141 2 7319 52801	Base Slide		1
96	141 2 7319 59200	Plate Eject		1
97	141 2 7419 80800	Lever Switch Cue Review		1
98	141 2 7419 84400	Lock Lid Cassette		1
99	141 2 7419 88900	Lever Eject		1
100	141 2 7539 23500	Post Lever R/P Switch		1
101	141 2 8419 13000	Lever R/P Switch		1
102	141 2 8539 47901	Spring Cassette		1
103	141 2 8549 16900	Spring Lever Play		1
104	141 2 4219 30300	Screw +BMS M2X6		2
105	143 3 1702 00818	Screw, Bind Hd. Tapping-B	+M2.0x8	2
106	103 3 1302 60511	Screw, Pan Hd. Tapping-2	+M2.6x5	2
107	143 3 1702 60818	Screw, Bind Hd. Tapping-B	+M2.6x8	4
108	101 3 1302 62511	Screw, Pan Hd.	+M2.6x25	1
109	141 2 4219 30100	Screw		2
110	101 3 1702 00811	Screw, Bind Hd.	+M2.0x8	1
111	143 3 1702 00818	Screw, Bind Hd. Tapping-B	+M2.0x8	2
112	101 3 1201 60611	Screw, Flat Hd.	+M2.6x6	1
113	143 3 1302 60611	Screw, Pan Hd. Tapping-B	+M2.6x6	2
114	143 3 1702 60611	Screw, Bind Hd. Tapping-B	+M2.6x6	2
115	4 2319 74360	Leaf Switch		1
116	4 2319 75860	Leaf Switch		2
117	141 2 4459 11800	Cushion Motor		2
118	141 2 4469 21300	Cushion		2
119	141 0 1939 01150	Deck 2 Terminal P.C.B. Assy		1
	4 2359 76356	Connector 3P Assy		1
	4 2359 76392	Connector 4P Assy		1

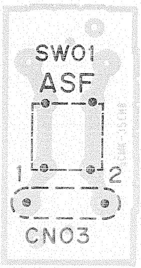
MAIN AMP P.C.BOARD

(BOTTOM VIEW)


LINE IN
LINE OUT
CN01
CN02
CN03
CN04
CN05
CN06
CN07
CN08
CN09
CN10
CN11
CN12
CN13
CN14
CN15
CN16
CN17
CN18
CN19
CN20
CN21
IC301
IC302
IC303
METAL
DOLBY B/C
DOLBY ON/OFF
DUBBLE SPEED
DUBBING
STAND BY
REC MUTE

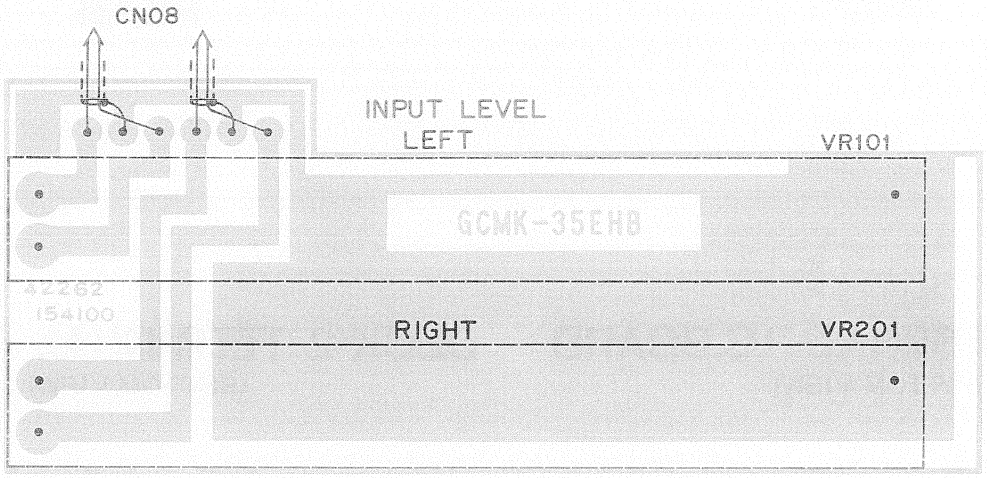
ASF SELECT SWITCH P.C.BOARD

(BOTTOM VIEW)


SW01
ASF
1
2
CN03

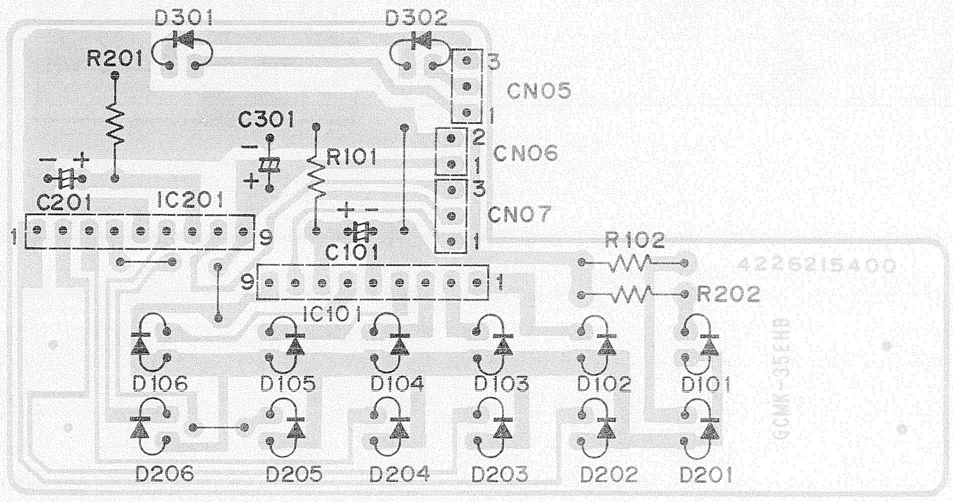
REC VOLUME P.C.BOARD

(BOTTOM VIEW)


CN08
INPUT LEVEL
LEFT
VR101
GCMK-35EHB
42262
154100
RIGHT
VR201

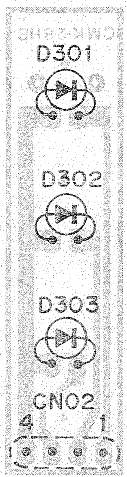
L.E.D. METER P.C.BOARD

(BOTTOM VIEW)


D301
D302
R201
3
CN05
1
C301
2
CN06
1
R101
3
CN07
1
C201
IC201
1
9
C101
R102
4226215400
9
1
R202
IC101
D106
D105
D104
D103
D102
D101
GCMK-35EHB
D206
D205
D204
D203
D202
D201

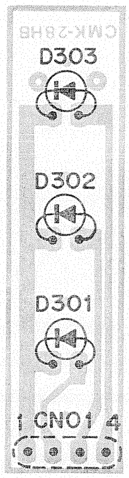
ASF L.E.D. P.C.BOARD

(BOTTOM VIEW)


CMK-28HB
D301
D302
D303
CN02
4
1

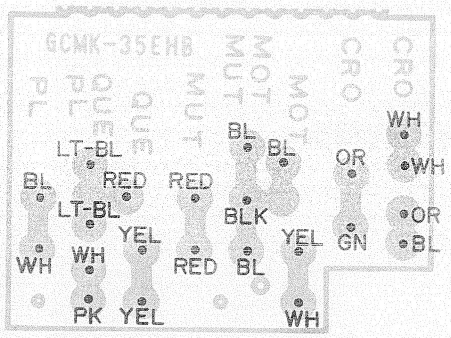
TAPE SELECT L.E.D. P.C.BOARD

(BOTTOM VIEW)


CMK-28HB
D303
D302
D301
1 CN01 4

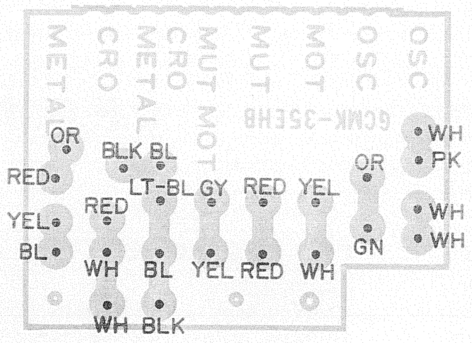
DECK 1 TERMINAL P.C.BOARD

(BOTTOM VIEW)


GCMK-35EHB
PL
QUE PL
QUE
MUT
MOT MUT
MOT
CRO
CRO
WH
BL
BL
LT-BL
OR
WH
BL
RED
RED
LT-BL
BLK
OR
YEL
YEL
GN
BL
WH
WH
RED
BL
PK
YEL
WH

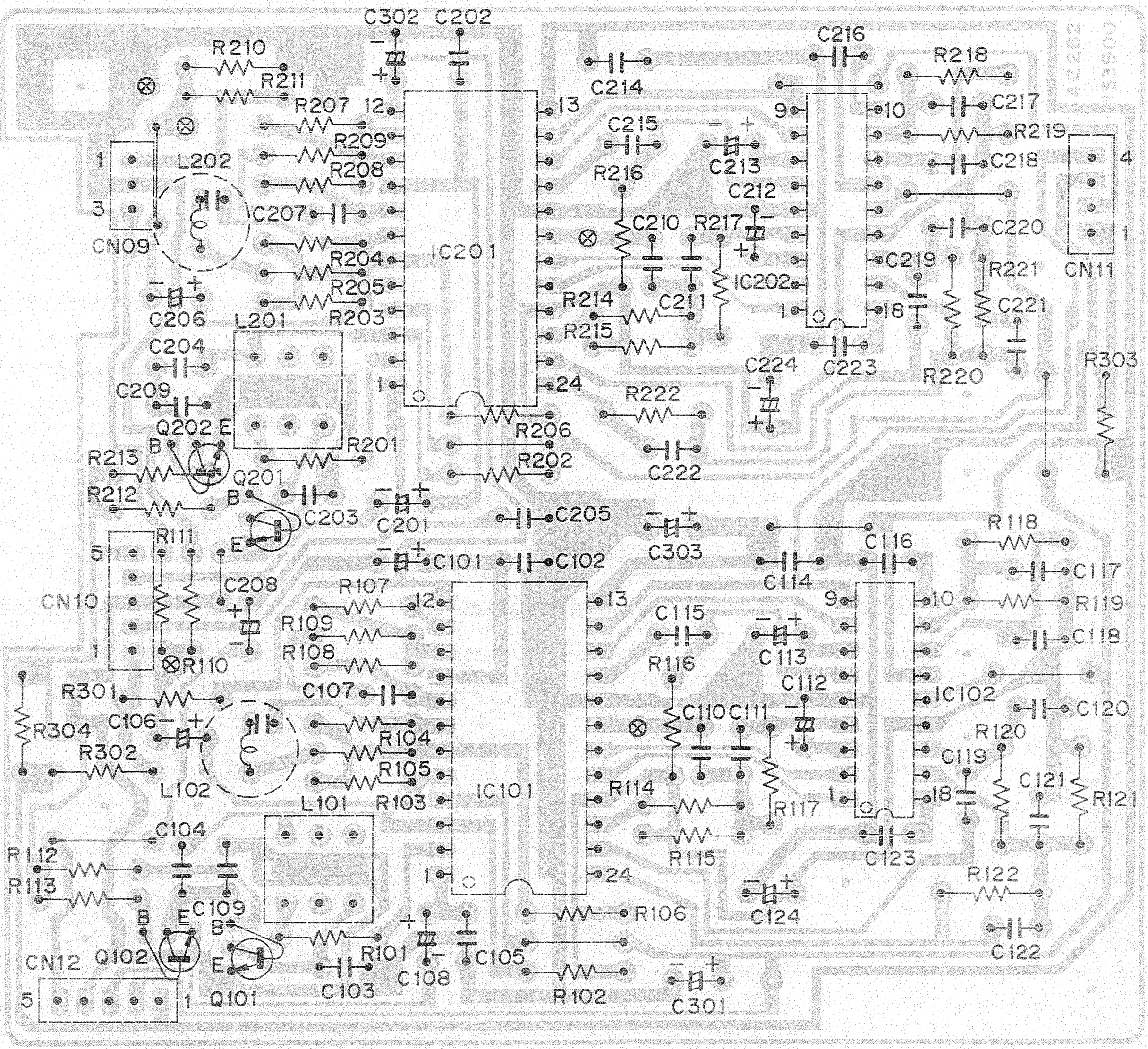
DECK 2 TERMINAL P.C.BOARD

(BOTTOM VIEW)


METAL
CRO
METAL
CRO
MUT MOT
MUT
MOT
OSC
OSC
GCMK-35EHB
WH
OR
BLK BL
PK
OR
RED
LT-BL
GY
RED
YEL
RED
WH
YEL
WH
BL
GN
WH
BL
YEL
RED
WH
WH
BLK

DOLBY UNIT P.C.BOARD

(BOTTOM VIEW)


C302
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C216
R210
R211
R218
R207
12
13
C214
9
10
C217
C215
R209
R219
1
L202
R208
C213
C218
4
R216
3
C212
C207
C210
R217
C220
CN09
IC201
R204
IC202
C219
R221
CN11
R205
R214
C211
C206
L201
R203
R215
18
C221
C204
C224
C223
R220
R303
C209
24
R222
Q202
E
R206
B
R201
R213
R202
C222
Q201
R212
C203
C201
C205
R118
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C208
R107
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R109
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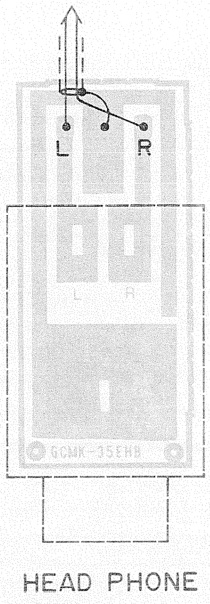
C118
R108
R110
R116
C112
R301
C107
IC102
C120
C106
C110
C111
R304
R104
R120
C119
R302
R105
C121
R121
L102
R114
L101
R103
IC101
R117
C104
C123
R112
R115
R113
R122
C109
C124
R106
Q102
R101
C105
C122
CN12
C108
Q101
C103
R102
C301
42262
153900

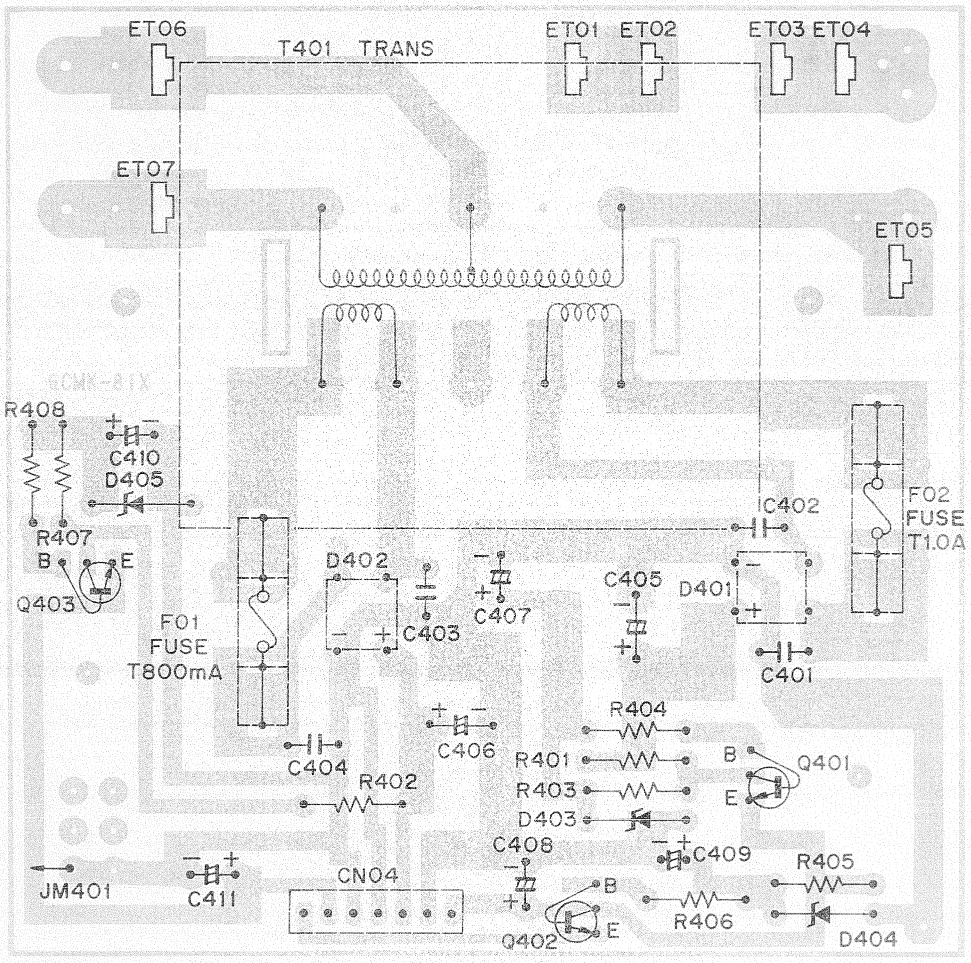
HEADPHONE P.C.BOARD

(BOTTOM VIEW)


CN21
L
R
L
R
GCMK-35EHB
HEAD PHONE

POWER SUPPLY P.C.BOARD

(BOTTOM VIEW)


ET06
T401 TRANS
ET01
ET02
ET03
ET04
ET07
ET05
GCMK-81X
R408
C410
D405
R407
B
E
Q403
F01
FUSE
T800mA
D402
C403
C407
C405
D401
C402
F02
FUSE
T1.0A
C401
C404
C406
R404
R401
R403
D403
B
Q401
E
R402
C408
C409
R405
JM401
C411
CN04
B
Q402
E
R406
D404

PARTS LIST

Ref. No.	Part No.	Description				Q'ty
	MAIN AMP P.C.B. ASSY					
	141 0 1939 01060	Main Amp P.C.B. Assy				1
CN01	4 2369 73140	Connector 4P				1
CN02	4 2369 73140	Connector 4P				1
CN03	4 2362 00770	Plug 2P				1
CN04	4 2369 73410	Connector 7P				1
CN05	4 2369 73130	Connector 3P				1
CN06	4 2362 00770	Plug 2P				1
CN07	4 2369 73130	Connector 3P				1
CN08	4 2369 73150	Connector 5P				1
CN09	4 2369 71482	Connector 3P				1
CN10	4 2369 72920	Connector 5P				1
CN11	4 2369 71851	Connector 4P				1
CN12	4 2369 72920	Connector 5P				1
CN13	4 2369 73130	Connector 3P				1
CN14	4 2362 00770	Plug 2P				1
CN15	4 2369 73140	Connector 4P				1
CN16	4 2369 73130	Connector 3P				1
CN17	4 2369 73140	Connector 4P				1
CN18	4 2369 73160	Connector 6P				1
CN19	4 2369 73130	Connector 3P				1
CN20	4 2369 73130	Connector 3P				1
CN21	4 2369 73130	Connector 3P				1
	4 2359 75361	4P Pin Jack				1
L101	4 2729 70290	Coil 33mH				1
L102	4 2729 70290	Coil 33mH				1
L103	4 2729 70290	Coil 33mH				1
L201	4 2729 70290	Coil 33mH				1
L202	4 2729 70290	Coil 33mH				1
L203	4 2729 70290	Coil 33mH				1
L301	4 2532 00040	Choke Coil 1mH				1
L302	4 2589 72270	OSC Trans				1
SW301	4 2319 76390	Select Switch 7Key				1
SW302	4 2319 76400	Slide SW 6				1
VR101	4 2222 02520	Semi Fixed 50K-B				1
VR102	4 2222 02520	Semi Fixed 50K-B				1
VR103	4 2222 02520	Semi Fixed 50K-B				1
VR104	4 2229 74370	Semi Fixed 300K-B				1
VR105	4 2222 02520	Semi Fixed 50K-B				1
VR106	4 2222 02520	Semi Fixed 50K-B				1
VR201	4 2222 02520	Semi Fixed 50K-B				1
VR202	4 2222 02520	Semi Fixed 50K-B				1
VR203	4 2222 02520	Semi Fixed 50K-B				1
VR204	4 2229 74370	Semi Fixed 300K-B				1
VR205	4 2222 02520	Semi Fixed 50K-B				1
VR206	4 2222 02520	Semi Fixed 50K-B				1
VR301	4 2229 74220	Semi Fixed 200-B				1
VR302	4 2229 74220	Semi Fixed 200-B				1
C101	CC1 0 0500 KD00C	Ceramic	10pF	50V	±10%	1
C102	CC4 7 1500 KD00C	Ceramic	470pF	50V	±10%	1
C103	CD4 7 5250 0001V	Electrolytic	4.7μF	25V		1
C104	CC2 7 1500 KD00C	Ceramic	270pF	50V	±10%	1
C105	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C106	CD2 2 6100 0001V	Electrolytic	22μF	10V		1
C107	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C108	CM1 2 3500 K00SV	Mylar	0.012μF	50V	±10%	1
C109	CM2 2 3500 K00SV	Mylar	0.022μF	50V	±10%	1
C110	CM6 8 2500 K00SV	Mylar	0.0068μF	50V	±10%	1
C111	CC1 0 0500 KD00C	Ceramic	10pF	50V	±10%	1
C112	CC4 7 1500 KD00C	Ceramic	470pF	50V	±10%	1
C113	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C114	CD2 2 6100 0001V	Electrolytic	22μF	10V		1
C115	CD4 7 5250 0001V	Electrolytic	4.7μF	25V		1
C116	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C117	CC4 7 1500 KD00C	Ceramic	470pF	50V	±10%	1
C118	CM1 2 3500 K00SV	Mylar	0.012μF	50V	±10%	1
C119	CM2 2 3500 K00SV	Mylar	0.022μF	50V	±10%	1
C120	CD1 0 6250 0001V	Electrolytic	10μF	25V		1
C121	CD4 7 6250 0001V	Electrolytic	47μF	25V		1
C122	CD1 0 5500 0001V	Electrolytic	1μF	50V		1
C123	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C124	CD4 7 5250 0001V	Electrolytic	4.7μF	25V		1
C125	CD1 0 6250 0001V	Electrolytic	10μF	25V		1
C126	CD2 2 6250 0001V	Electrolytic	22μF	25V		1
C127	CM1 0 4500 J00TV	Mylar	0.1μF	50V	±5%	1
C128	CC4 7 1500 KD00C	Ceramic	470pF	50V	±10%	1
C129	CC6 8 0500 KD00C	Ceramic	68pF	50V	±10%	1
C130	CM3 3 2500 K00SV	Mylar	0.0033μF	50V	±10%	1
C132	CM2 7 2500 K00SV	Mylar	0.0027μF	50V	±10%	1
C134	CM1 8 2500 K00SV	Mylar	0.0018μF	50V	±10%	1
C136	CM1 0 2500 K00SV	Mylar	0.001μF	50V	±10%	1
C138	CM1 0 2500 K00SV	Mylar	0.001μF	50V	±10%	1
C140	CM1 0 2500 K00SV	Mylar	0.001μF	50V	±10%	1
C141	CM1 0 2500 K00SV	Mylar	0.001μF	50V	±10%	1
C142	CC2 2 1500 KE00R	Ceramic	220pF	50V	±10%	1
C144	CM2 2 3500 K00SV	Mylar	0.022μF	50V	±10%	1
C201	CC1 0 0500 KD00C	Ceramic	10pF	50V	±10%	1
C202	CC4 7 1500 KD00C	Ceramic	470pF	50V	±10%	1
C203	CD4 7 5250 0001V	Electrolytic	4.7μF	25V		1
C204	CC2 7 1500 KD00C	Ceramic	270pF	50V	±10%	1
C205	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C206	CD2 2 6100 0001V	Electrolytic	22μF	10V		1
C207	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C208	CM1 2 3500 K00SV	Mylar	0.012μF	50V	±10%	1
C209	CM2 2 3500 K00SV	Mylar	0.022μF	50V	±10%	1
C210	CM6 8 2500 K00SV	Mylar	0.0068μF	50V	±10%	1
C211	CC1 0 0500 KD00C	Ceramic	10pF	50V	±10%	1
C212	CC4 7 1500 KD00C	Ceramic	470pF	50V	±10%	1
C213	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C214	CD2 2 6100 0001V	Electrolytic	22μF	10V		1
C215	CD4 7 5250 0001V	Electrolytic	4.7μF	25V		1
C216	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C217	CC4 7 1500 KD00C	Ceramic	470pF	50V	±10%	1
C218	CM1 2 3500 K00SV	Mylar	0.012μF	50V	±10%	1
C219	CM2 2 3500 K00SV	Mylar	0.022μF	50V	±10%	1
C220	CD1 0 6250 0001V	Electrolytic	10μF	25V		1
C221	CD4 7 6250 0001V	Electrolytic	47μF	25V		1
C222	CD1 0 5500 0001V	Electrolytic	1μF	50V		1
C223	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C224	CD4 7 5250 0001V	Electrolytic	4.7μF	25V		1
C225	CD1 0 6250 0001V	Electrolytic	10μF	25V		1
C226	CD2 2 6250 0001V	Electrolytic	22μF	25V		1
C227	CM1 0 4500 J00TV	Mylar	0.1μF	50V	±5%	1
C228	CC4 7 1500 KD00C	Ceramic	470pF	50V	±10%	1
C229	CC6 8 0500 KD00C	Ceramic	68pF	50V	±10%	1
C230	CM3 3 2500 K00SV	Mylar	0.0033μF	50V	±10%	1
C232	CM2 7 2500 K00SV	Mylar	0.0027μF	50V	±10%	1
C234	CM1 8 2500 K00SV	Mylar	0.0018μF	50V	±10%	1
C236	CM1 0 2500 K00SV	Mylar	0.001μF	50V	±10%	1
C238	CM1 0 2500 K00SV	Mylar	0.001μF	50V	±10%	1
C240	CM1 0 2500 K00SV	Mylar	0.001μF	50V	±10%	1
C241	CM1 0 2500 K00SV	Mylar	0.001μF	50V	±10%	1
C242	CC2 2 1500 KE00R	Ceramic	220pF	50V	±10%	1
C244	CM2 2 3500 K00SV	Mylar	0.022μF	50V	±10%	1
C301	4 2239 71280	Electrolytic	1000μF	16V		1
C302	CM6 8 2500 K00SV	Mylar	0.0068μF	50V	±10%	1
C303	CM6 8 2500 K00SV	Mylar	0.0068μF	50V	±10%	1
C304	CD1 0 5500 0001V	Electrolytic	1μF	50V		1

PARTS LIST (Continued)

Ref. No.	Part No.	Description				Q'ty
C305	CD1 0 5500 0001V	Electrolytic	1μF	50V		1
C306	CD1 0 5500 0001V	Electrolytic	1μF	50V		1
C307	CM6 8 2500 K00SV	Mylar	0.0068μF	50V	±10%	1
C308	CD1 0 5500 0001V	Electrolytic	1μF	50V		1
C310	CD1 0 7250 0001V	Electrolytic	100μF	25V		1
C311	CD4 7 7250 0001V	Electrolytic	470μF	25V		1
C312	CD1 0 6250 0001V	Electrolytic	10μF	25V		1
C313	CD1 0 6250 0001V	Electrolytic	10μF	25V		1
C314	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C315	CD1 0 5500 0001V	Electrolytic	1μF	50V		1
C317	CD1 0 6160 0001V	Electrolytic	10μF	16V		1
C318	CD1 0 7250 0001V	Electrolytic	100μF	25V		1
C319	CD1 0 7250 0001V	Electrolytic	100μF	25V		1
C322	CM5 6 2500 K00SV	Mylar	0.0056μF	50V	±10%	1
C323	CM1 5 3500 K00SV	Mylar	0.015μF	50V	±10%	1
C324	CD1 0 5500 0001V	Electrolytic	1μF	50V		1
C325	CP4 7 2101 J003V	Polypropylen	0.0047μF	100V	±5%	1
D301	4 2029 71440	Diode, 1SS 95				1
D302	202 5 3160 00100	Diode, GMA 01				1
D303	4 2029 71440	Diode, 1SS 95				1
D304	4 2029 71440	Diode, 1SS 95				1
D305	4 2029 71440	Diode, 1SS 95				1
D306	4 2029 71440	Diode, 1SS 95				1
D307	4 2029 71440	Diode, 1SS 95				1
D308	4 2029 71440	Diode, 1SS 95				1
D309	4 2029 71440	Diode, 1SS 95				1
D310	4 2029 71440	Diode, 1SS 95				1
D311	202 5 3210 05612	Zener Diode, GZA5.6Y				1
D312	4 2029 71440	Diode, 1SS 95				1
D313	202 5 3210 03312	Zener Diode, GZA3.3Y				1
D314	4 2029 71440	Diode, 1SS 95				1
D315	202 5 3210 13012	Zener Diode, GZA 13Y				1
D316	4 2029 71440	Diode, 1SS 95				1
D317	4 2029 71440	Diode, 1SS 95				1
D318	4 2029 71440	Diode, 1SS 95				1
D319	4 2029 71440	Diode, 1SS 95				1
D320	4 2029 71440	Diode, 1SS 95				1
D321	4 2029 71440	Diode, 1SS 95				1
D322	4 2029 71440	Diode, 1SS 95				1
D323	4 2029 71440	Diode, 1SS 95				1
D324	4 2029 71440	Diode, 1SS 95				1
D325	4 2029 71440	Diode, 1SS 95				1
D326	4 2029 71440	Diode, 1SS 95				1
D327	4 2029 71440	Diode, 1SS 95				1
D328	202 5 3210 05612	Zener Diode, GZA5.6Y				1
D329	4 2029 71440	Diode, 1SS 95				1
D330	4 2029 71440	Diode, 1SS 95				1
D331	4 2029 71440	Diode, 1SS 95				1
D332	4 2029 71440	Diode, 1SS 95				1
D333	4 2029 71440	Diode, 1SS 95				1
D334	4 2029 71440	Diode, 1SS 95				1
D335	4 2029 71440	Diode, 1SS 95				1
D336	4 2029 71440	Diode, 1SS 95				1
D337	4 2029 71440	Diode, 1SS 95				1
D338	4 2029 71440	Diode, 1SS 95				1
D339	4 2029 71440	Diode, 1SS 95				1
D340	4 2029 71440	Diode, 1SS 95				1
D341	202 5 2810 44210	Diode, DS 442				1
D342	4 2029 71440	Diode, 1SS 95				1
D343	4 2029 71440	Diode, 1SS 95				1
D344	202 5 2810 44210	Diode, DS 442				1
D345	202 5 3210 05612	Zener Diode, GZA5.6Y				1
D346	202 5 3210 05612	Zener Diode, GZA5.6Y				1
D347	4 2029 71440	Diode, 1SS 95				1

Ref. No.	Part No.	Description	Q'ty
D348	4 2029 71440	Diode, 1SS 95	1
D349	4 2029 71440	Diode, 1SS 95	1
D350	4 2029 71440	Diode, 1SS 95	1
D351	202 5 3210 10011	Zener Diode, GZA 10X	1
D352	4 2029 71440	Diode, 1SS 95	1
D353	202 5 3210 05612	Zener Diode, GZA 5.6Y	1
D354	202 5 2810 44210	Diode, DS 442	1
D355	202 5 3210 05612	Zener Diode, GZA 5.6Y	1
D356	202 5 2810 44210	Diode, DS 442	1
IC301	206 5 9417 51010	IC, LC 7510	1
IC302	206 5 9504 01110	IC, LC 4011 B	1
IC303	206 5 9504 01110	IC, LC 4011 B	1
Q101	203 5 5251 57169	TR, 2SC 1571 FL	1
Q102	203 5 5251 57169	TR, 2SC 1571 FL	1
Q103	203 5 5251 57169	TR, 2SC 1571 FL	1
Q104	203 5 5083 33165	TR, 2SC 3331 U	1
Q105	203 5 4921 01260	TR, 2SD 1012 F	1
Q106	203 5 4921 01260	TR, 2SD 1012 F	1
Q107	203 5 5251 57169	TR, 2SC 1571 FL	1
Q108	203 5 5251 57169	TR, 2SC 1571 FL	1
Q109	203 5 5083 33165	TR, 2SC 3331 U	1
Q110	203 5 4921 01260	TR, 2SD 1012 F	1
Q111	203 5 4921 01260	TR, 2SD 1012 F	1
Q112	203 5 5083 33165	TR, 2SC 3331 U	1
Q113	203 5 4921 01260	TR, 2SD 1012 F	1
Q114	203 5 4921 01260	TR, 2SD 1012 F	1
Q115	203 5 5083 33165	TR, 2SC 3331 U	1
Q116	203 5 5083 33165	TR, 2SC 3331 U	1
Q117	203 5 5251 57169	TR, 2SC 1571 FL	1
Q118	203 5 4921 01260	TR, 2SD 1012 F	1
Q119	203 5 4921 01260	TR, 2SD 1012 F	1
Q120	203 5 4921 01260	TR, 2SD 1012 F	1
Q121	203 5 4921 01260	TR, 2SD 1012 F	1
Q122	203 5 4921 01260	TR, 2SD 1012 F	1
Q123	203 5 4921 01260	TR, 2SD 1012 F	1
Q124	203 5 4921 01260	TR, 2SD 1012 F	1
Q201	203 5 5251 57169	TR, 2SC 1571 FL	1
Q202	203 5 5251 57169	TR, 2SC 1571 FL	1
Q203	203 5 5251 57169	TR, 2SC 1571 FL	1
Q204	203 5 5083 33165	TR, 2SC 3331 U	1
Q205	203 5 4921 01260	TR, 2SD 1012 F	1
Q206	203 5 4921 01260	TR, 2SD 1012 F	1
Q207	203 5 5251 57169	TR, 2SC 1571 FL	1
Q208	203 5 5251 57169	TR, 2SC 1571 FL	1
Q209	203 5 5083 33165	TR, 2SC 3331 U	1
Q210	203 5 4921 01260	TR, 2SD 1012 F	1
Q211	203 5 4921 01260	TR, 2SD 1012 F	1
Q212	203 5 5083 33165	TR, 2SC 3331 U	1
Q213	203 5 4921 01260	TR, 2SD 1012 F	1
Q214	203 5 4921 01260	TR, 2SD 1012 F	1
Q215	203 5 5083 33165	TR, 2SC 3331 U	1
Q216	203 5 5083 33165	TR, 2SC 3331 U	1
Q217	203 5 5251 57169	TR, 2SC 1571 FL	1
Q218	203 5 4921 01260	TR, 2SD 1012 F	1
Q219	203 5 4921 01260	TR, 2SD 1012 F	1
Q220	203 5 4921 01260	TR, 2SD 1012 F	1
Q221	203 5 4921 01260	TR, 2SD 1012 F	1
Q222	203 5 4921 01260	TR, 2SD 1012 F	1
Q223	203 5 4921 01260	TR, 2SD 1012 F	1
Q224	203 5 4921 01260	TR, 2SD 1012 F	1
Q301	203 5 5083 33165	TR, 2SC 3331 U	1
Q302	203 5 5083 33165	TR, 2SC 3331 U	1
Q303	203 5 5083 33165	TR, 2SC 3331 U	1
Q304	203 5 5083 33165	TR, 2SC 3331 U	1

PARTS LIST (Continued)

Ref. No.	Part No.	Description				Q'ty
Q305	203 5 5083 33165	TR, 2SC 3331 U				1
Q306	203 5 5083 33165	TR, 2SC 3331 U				1
Q307	203 5 7200 60860	TR, 2SA 608 F				1
Q308	203 5 7200 60860	TR, 2SA 608 F				1
Q309	203 5 7200 60860	TR, 2SA 608 F				1
Q310	203 5 4921 01260	TR, 2SD 1012 F				1
Q311	203 5 4921 01260	TR, 2SD 1012 F				1
Q312	203 5 7200 60860	TR, 2SA 608 F				1
Q313	203 5 7200 60860	TR, 2SA 608 F				1
Q314	203 5 7200 60860	TR, 2SA 608 F				1
Q315	203 5 7200 60860	TR, 2SA 608 F				1
Q316	203 5 5083 33165	TR, 2SC 3331 U				1
Q317	203 5 5083 33165	TR, 2SC 3331 U				1
Q320	203 5 5083 33165	TR, 2SC 3331 U				1
Q321	203 5 5083 33165	TR, 2SC 3331 U				1
Q322	203 5 2183 13586	TR, 2SC 3135 U				1
Q323	203 5 2183 13586	TR, 2SC 3135 U				1
Q324	203 5 7252 27460	TR, 2SC 2274 F				1
Q325	203 5 7252 27460	TR, 2SC 2274 F				1
QT301	203 5 1231 34610	TR, 2SA 1346				1
QT302	203 5 1231 34610	TR, 2SA 1346				1
R101	RP1 8 4121 JH000	Carbon	180kΩ	1/8W	±5%	1
R102	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R103	RP6 8 0121 JH000	Carbon	68Ω	1/8W	±5%	1
R104	RP1 0 2121 JH000	Carbon	1kΩ	1/8W	±5%	1
R105	RP1 8 4121 JH000	Carbon	180kΩ	1/8W	±5%	1
R106	RP4 7 2121 JH000	Carbon	4.7kΩ	1/8W	±5%	1
R107	RP3 9 4121 JH000	Carbon	390kΩ	1/8W	±5%	1
R108	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R109	RD3 3 2251 JM000	Carbon	3.3kΩ	1/4W	±5%	1
R110	RP1 0 5121 JH000	Carbon	1MΩ	1/8W	±5%	1
R111	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R112	RD5 6 3251 JM000	Carbon	56kΩ	1/4W	±5%	1
R113	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R114	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R115	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R116	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R117	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R118	RP1 8 4121 JH000	Carbon	180kΩ	1/8W	±5%	1
R119	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R120	RP6 8 0121 JH000	Carbon	68Ω	1/8W	±5%	1
R121	RP1 0 2121 JH000	Carbon	1kΩ	1/8W	±5%	1
R122	RP1 8 4121 JH000	Carbon	180kΩ	1/8W	±5%	1
R123	RP1 0 0121 JH000	Carbon	10Ω	1/8W	±5%	1
R124	RP6 8 4121 JH000	Carbon	680kΩ	1/8W	±5%	1
R125	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R126	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R127	RD3 3 2251 JM000	Carbon	3.3kΩ	1/4W	±5%	1
R128	RP1 0 5121 JH000	Carbon	1MΩ	1/8W	±5%	1
R129	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R130	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R131	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R132	RD2 2 3251 JM000	Carbon	22kΩ	1/4W	±5%	1
R133	RP8 2 2121 JH000	Carbon	8.2kΩ	1/8W	±5%	1
R134	RP8 2 3121 JH000	Carbon	82kΩ	1/8W	±5%	1
R135	RP8 2 2121 JH000	Carbon	8.2kΩ	1/8W	±5%	1
R136	RH5 6 1501 JZ003	Metal	560Ω	1/2W	±5%	1
R137	RP2 2 0121 JH000	Carbon	22Ω	1/8W	±5%	1
R138	RP6 8 0121 JH000	Carbon	68Ω	1/8W	±5%	1
R139	RP1 0 2121 JH000	Carbon	1kΩ	1/8W	±5%	1
R140	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R141	RP3 3 3121 JH000	Carbon	33kΩ	1/8W	±5%	1
R142	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R143	RP1 0 2121 JH000	Carbon	1kΩ	1/8W	±5%	1
R144	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R145	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R146	RP2 7 2121 JH000	Carbon	2.7kΩ	1/8W	±5%	1
R147	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R148	RP6 8 2121 JH000	Carbon	6.8kΩ	1/8W	±5%	1
R149	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R150	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R151	RP3 3 4121 JH000	Carbon	330kΩ	1/8W	±5%	1
R152	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R153	RP4 7 2121 JH000	Carbon	4.7kΩ	1/8W	±5%	1
R154	RP5 6 1121 JH000	Carbon	560Ω	1/8W	±5%	1
R155	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R156	RP6 8 3121 JH000	Carbon	68kΩ	1/8W	±5%	1
R157	RP1 2 3121 JH000	Carbon	12kΩ	1/8W	±5%	1
R158	RD8 2 2251 JM000	Carbon	8.2kΩ	1/4W	±5%	1
R159	RP3 9 2121 JH000	Carbon	3.9kΩ	1/8W	±5%	1
R160	RD2 2 3251 JM000	Carbon	22kΩ	1/4W	±5%	1
R161	RP5 6 1121 JH000	Carbon	560Ω	1/8W	±5%	1
R163	RP5 6 1121 JH000	Carbon	560Ω	1/8W	±5%	1
R165	RP3 9 0121 JH000	Carbon	39Ω	1/8W	±5%	1
R167	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R168	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R169	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R170	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R172	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R174	RP2 7 2121 JH000	Carbon	2.7kΩ	1/8W	±5%	1
R175	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R176	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R177	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R178	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R180	RP1 5 2121 JH000	Carbon	1.5kΩ	1/8W	±5%	1
R181	RP1 8 4121 JH000	Carbon	180kΩ	1/8W	±5%	1
R201	RP1 8 4121 JH000	Carbon	180kΩ	1/8W	±5%	1
R202	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R203	RP6 8 0121 JH000	Carbon	68Ω	1/8W	±5%	1
R204	RP1 0 2121 JH000	Carbon	1kΩ	1/8W	±5%	1
R205	RP1 8 4121 JH000	Carbon	180kΩ	1/8W	±5%	1
R206	RP4 7 2121 JH000	Carbon	4.7kΩ	1/8W	±5%	1
R207	RP3 9 4121 JH000	Carbon	390kΩ	1/8W	±5%	1
R208	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R209	RD3 3 2251 JM000	Carbon	3.3kΩ	1/4W	±5%	1
R210	RP1 0 5121 JH000	Carbon	1MΩ	1/8W	±5%	1
R211	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R212	RD5 6 3251 JM000	Carbon	56kΩ	1/4W	±5%	1
R213	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R214	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R215	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R216	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R217	RD2 2 3251 JM000	Carbon	22kΩ	1/4W	±5%	1
R218	RP1 8 4121 JH000	Carbon	180kΩ	1/8W	±5%	1
R219	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R220	RP6 8 0121 JH000	Carbon	68Ω	1/8W	±5%	1
R221	RP1 0 2121 JH000	Carbon	1kΩ	1/8W	±5%	1
R222	RP1 8 4121 JH000	Carbon	180kΩ	1/8W	±5%	1
R223	RP1 0 0121 JH000	Carbon	10Ω	1/8W	±5%	1
R224	RP6 8 4121 JH000	Carbon	680kΩ	1/8W	±5%	1
R225	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R226	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R227	RD3 3 2251 JM000	Carbon	3.3kΩ	1/4W	±5%	1
R228	RP1 0 5121 JH000	Carbon	1MΩ	1/8W	±5%	1
R229	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R230	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R231	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R232	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1

PARTS LIST (Continued)

Ref. No.	Part No.	Description				Q'ty
R233	RP8 2 2121 JH000	Carbon	8.2kΩ	1/8W	±5%	1
R234	RP8 2 3121 JH000	Carbon	82kΩ	1/8W	±5%	1
R235	RP8 2 2121 JH000	Carbon	8.2kΩ	1/8W	±5%	1
R236	RH5 6 1501 JZ003	Metal	560Ω	1/2W	±5%	1
R237	RP2 2 0121 JH000	Carbon	22Ω	1/8W	±5%	1
R238	RP6 8 0121 JH000	Carbon	68Ω	1/8W	±5%	1
R239	RP1 0 2121 JH000	Carbon	1kΩ	1/8W	±5%	1
R240	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R241	RP3 3 3121 JH000	Carbon	33kΩ	1/8W	±5%	1
R242	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R243	RP1 0 2121 JH000	Carbon	1kΩ	1/8W	±5%	1
R244	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R245	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R246	RP2 7 2121 JH000	Carbon	2.7kΩ	1/8W	±5%	1
R247	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R248	RP6 8 2121 JH000	Carbon	6.8kΩ	1/8W	±5%	1
R249	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R250	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R251	RP3 3 4121 JH000	Carbon	330kΩ	1/8W	±5%	1
R252	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R253	RP4 7 2121 JH000	Carbon	4.7kΩ	1/8W	±5%	1
R254	RP5 6 1121 JH000	Carbon	560Ω	1/8W	±5%	1
R255	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R256	RP6 8 3121 JH000	Carbon	68kΩ	1/8W	±5%	1
R257	RP1 2 3121 JH000	Carbon	12kΩ	1/8W	±5%	1
R258	RP8 2 2121 JH000	Carbon	8.2kΩ	1/8W	±5%	1
R259	RP3 9 2121 JH000	Carbon	3.9kΩ	1/8W	±5%	1
R260	RD2 2 3251 JM000	Carbon	22kΩ	1/4W	±5%	1
R261	RP5 6 1121 JH000	Carbon	560Ω	1/8W	±5%	1
R263	RP5 6 1121 JH000	Carbon	560Ω	1/8W	±5%	1
R265	RP3 9 0121 JH000	Carbon	39Ω	1/8W	±5%	1
R267	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R268	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R269	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R270	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R272	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R274	RP2 7 2121 JH000	Carbon	2.7kΩ	1/8W	±5%	1
R275	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R276	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R277	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R278	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R280	RP1 5 2121 JH000	Carbon	1.5kΩ	1/8W	±5%	1
R281	RP1 8 4121 JH000	Carbon	180kΩ	1/8W	±5%	1
R301	RD1 0 2251 JM000	Carbon	1kΩ	1/4W	±5%	1
R302	RP3 3 2121 JH000	Carbon	3.3kΩ	1/8W	±5%	1
R303	RP3 9 1121 JH000	Carbon	390Ω	1/8W	±5%	1
R304	RP2 7 4121 JH000	Carbon	270kΩ	1/8W	±5%	1
R305	RP5 6 A121 JH000	Carbon	5.6Ω	1/8W	±5%	1
R306	RP1 0 2121 JH000	Carbon	1kΩ	1/8W	±5%	1
R307	RP1 8 4121 JH000	Carbon	180kΩ	1/8W	±5%	1
R308	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R309	RP2 2 4121 JH000	Carbon	220kΩ	1/8W	±5%	1
R310	RP4 7 4121 JH000	Carbon	470kΩ	1/8W	±5%	1
R311	RP1 5 4121 JH000	Carbon	150kΩ	1/8W	±5%	1
R312	RP5 6 3121 JH000	Carbon	56kΩ	1/8W	±5%	1
R313	RP2 2 2121 JH000	Carbon	2.2kΩ	1/8W	±5%	1
R314	RP4 7 2121 JH000	Carbon	4.7kΩ	1/8W	±5%	1
R315	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R316	RP6 8 1121 JH000	Carbon	680Ω	1/8W	±5%	1
R317	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R318	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R319	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R320	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R321	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R323	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R325	RP3 9 2121 JH000	Carbon	3.9kΩ	1/8W	±5%	1
R326	RP1 8 3121 JH000	Carbon	18kΩ	1/8W	±5%	1
R327	RP1 5 3121 JH000	Carbon	15kΩ	1/8W	±5%	1
R328	RP4 7 2121 JH000	Carbon	4.7kΩ	1/8W	±5%	1
R329	RP3 9 2121 JH000	Carbon	3.9kΩ	1/8W	±5%	1
R330	RP3 9 2121 JH000	Carbon	3.9kΩ	1/8W	±5%	1
R331	RP5 6 2121 JH000	Carbon	5.6kΩ	1/8W	±5%	1
R332	RP1 0 2121 JH000	Carbon	1kΩ	1/8W	±5%	1
R333	RP4 7 2121 JH000	Carbon	4.7kΩ	1/8W	±5%	1
R334	RP4 7 2121 JH000	Carbon	4.7kΩ	1/8W	±5%	1
R335	RD1 0 2251 JM000	Carbon	1kΩ	1/4W	±5%	1
R336	RP5 6 3121 JH000	Carbon	56kΩ	1/8W	±5%	1
R337	RP5 6 3121 JH000	Carbon	56kΩ	1/8W	±5%	1
R338	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R339	RP1 0 1121 JH000	Carbon	100Ω	1/8W	±5%	1
R340	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R341	RP3 9 2121 JH000	Carbon	3.9kΩ	1/8W	±5%	1
R342	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R343	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R344	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R345	RP1 0 1121 JH000	Carbon	100Ω	1/8W	±5%	1
R346	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R347	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R348	RP4 7 3121 JH000	Carbon	47kΩ	1/8W	±5%	1
R349	RP1 0 1121 JH000	Carbon	100Ω	1/8W	±5%	1
R350	RP1 0 1121 JH000	Carbon	100Ω	1/8W	±5%	1
R351	RP3 9 1121 JH000	Carbon	390Ω	1/8W	±5%	1
R352	RP3 9 1121 JH000	Carbon	390Ω	1/8W	±5%	1
R353	4 2219 70363	LT Resistor	1kΩ			1
R354	4 2219 70363	LT Resistor	1kΩ			1
R355	RP1 0 3121 JH000	Carbon	10kΩ	1/8W	±5%	1
R357	RP4 7 2121 JH000	Carbon	4.7kΩ	1/8W	±5%	1
R358	RP1 5 3121 JH000	Carbon	15kΩ	1/8W	±5%	1
R359	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R360	RP4 7 2121 JH000	Carbon	4.7kΩ	1/8W	±5%	1
R361	RP1 5 3121 JH000	Carbon	15kΩ	1/8W	±5%	1
R362	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R363	RP4 7 2121 JH000	Carbon	4.7kΩ	1/8W	±5%	1
R364	RP1 5 3121 JH000	Carbon	15kΩ	1/8W	±5%	1
R365	RP4 7 2121 JH000	Carbon	4.7kΩ	1/8W	±5%	1
R366	RP1 5 3121 JH000	Carbon	15kΩ	1/8W	±5%	1
R367	RD5 6 1161 JH000	Carbon	560Ω	1/6W	±5%	1
R368	RD4 7 0251 JS000	Carbon	47Ω	1/4W	±5%	1
R369	RD6 8 1251 JS000	Carbon	680Ω	1/4W	±5%	1
R370	RH1 2 2501 JZ003	Metal	1.2kΩ	1/2W	±5%	1
R371	RH1 2 2501 JZ003	Metal	1.2kΩ	1/2W	±5%	1
R372	RH1 8 2501 JZ003	Metal	1.8kΩ	1/2W	±5%	1
R373	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R374	RP2 2 3121 JH000	Carbon	22kΩ	1/8W	±5%	1
R375	RD2 2 3251 JM000	Carbon	22kΩ	1/4W	±5%	1
R378	RD1 0 2251 JM000	Carbon	1kΩ	1/4W	±5%	1
R379	RD1 0 2251 JM000	Carbon	1kΩ	1/4W	±5%	1
R380	RP8 2 3121 JH000	Carbon	82kΩ	1/8W	±5%	1
R381	RP3 9 3121 JH000	Carbon	39kΩ	1/8W	±5%	1
R382	RH4 7 1102 JZ003	Metal	470Ω	1W	±5%	1
R383	RH3 9 1501 JZ003	Metal	390Ω	1/2W	±5%	1
R384	RH2 7 1501 JZ003	Metal	270Ω	1/2W	±5%	1
R385	RH1 5 1501 JZ003	Metal	150Ω	1/2W	±5%	1
R386	RD1 5 1251 JS000	Carbon	150Ω	1/4W	±5%	1
R387	RD4 1 0251 JS000	Carbon	47Ω	1/4W	±5%	1
R388	RD1 0 0251 JS000	Carbon	10Ω	1/4W	±5%	1
R389	RD1 8 3251 JM000	Carbon	18kΩ	1/4W	±5%	1
R391	RD5 6 A251 JS000	Carbon	5.6Ω	1/4W	±5%	1

PARTS LIST (Continued)

Ref. No.	Part No.	Description				Q'ty
R392	RP3 9 4121 JH000	Carbon	390kΩ	1/8W	±5%	1
R393	RP3 3 2121 JH000	Carbon	3.3kΩ	1/8W	±5%	1
R394	RP4 7 4121 JH000	Carbon	470kΩ	1/8W	±5%	1
R395	RP5 6 3121 JH000	Carbon	56kΩ	1/8W	±5%	1

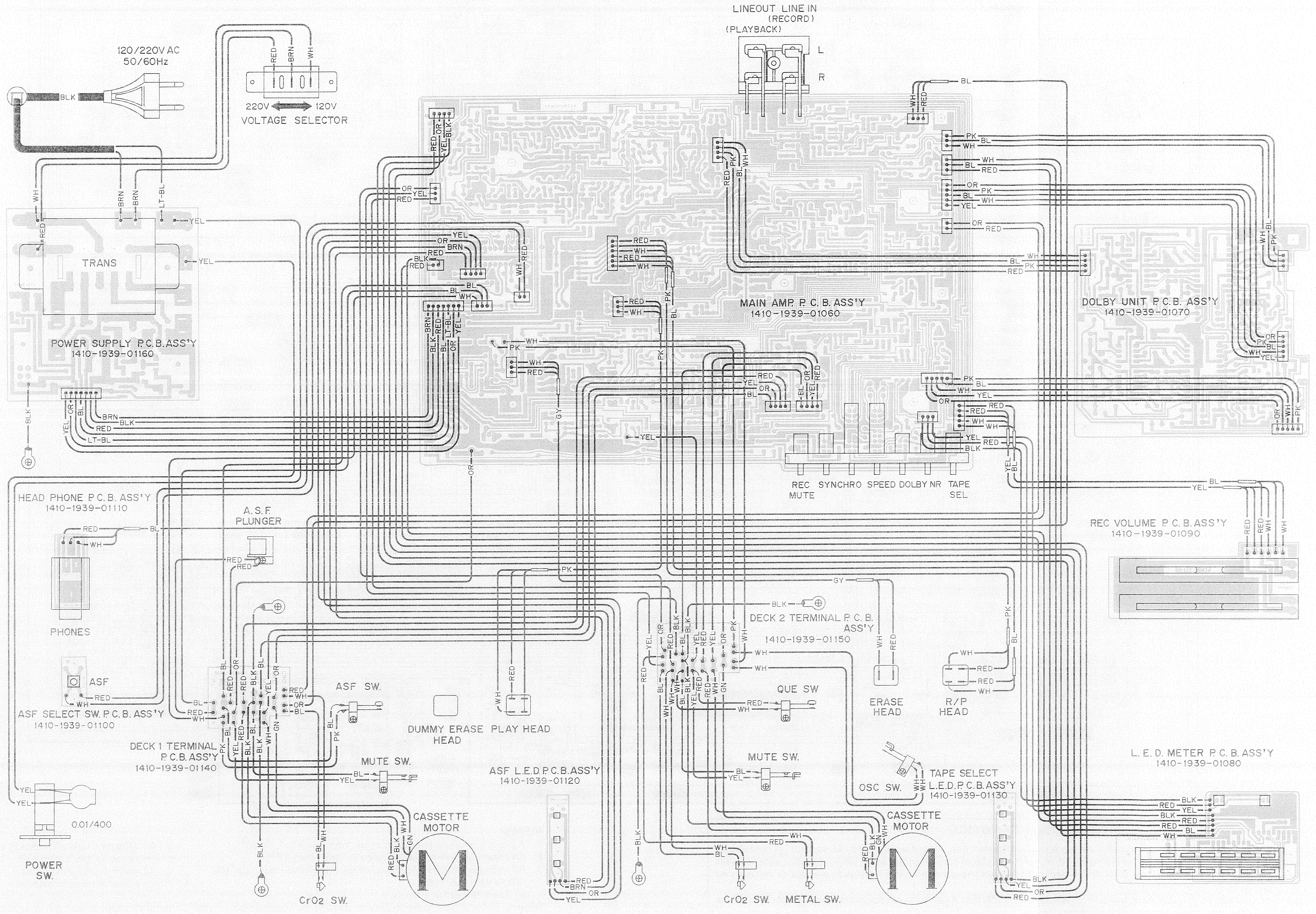
DOLBY UNIT P.C.B. ASSY

Ref. No.	Part No.	Description				Q'ty
	141 0 1939 01070	Dolby Unit P.C.B. Assy				1
CN09	4 2359 76354	Connector 3P Assy				1
CN10	4 2359 75988	Connector 5P Assy				1
CN11	4 2359 76390	Connector 4P Assy				1
CN12	4 2359 75989	Connector 5P Assy				1
L101	4 2539 71370	MPX Filter				1
L102	4 2729 70560	Coil Filter				1
L201	4 2539 71370	MPX Filter				1
L202	4 2729 70560	Coil Filter				1
C101	CD1 0 5500 0001V	Electrolytic	1µF	50V		1
C102	CC4 7 0500 KD00C	Ceramic	47pF	50V	±10%	1
C103	CP1 0 2101 J003V	Polypropylen	0.001µF	100V	±5%	1
C104	CM3 9 2500 K00SV	Mylar	0.0039µF	50V	±10%	1
C105	CC2 2 1500 KD00C	Ceramic	220pF	50V	±10%	1
C106	CD1 0 6160 0001V	Electrolytic	10µF	16V		1
C107	CM1 0 3500 K00SV	Mylar	0.01µF	50V	±10%	1
C108	CD1 0 5500 0001V	Electrolytic	1µF	50V		1
C109	CM1 2 2500 K00SV	Mylar	0.0012µF	50V	±10%	1
C110	CM3 3 3500 K00SV	Mylar	0.033µF	50V	±10%	1
C111	CM4 7 2500 K00SV	Mylar	0.0047µF	50V	±10%	1
C112	CD1 0 6160 0001V	Electrolytic	10µF	16V		1
C113	CD1 0 6160 0001V	Electrolytic	10µF	16V		1
C114	CC1 0 4500 ZG00C	Ceramic	0.1µF	50V	+80,-20%	1
C115	CM4 7 2500 K00SV	Mylar	0.0047µF	50V	±10%	1
C116	CM2 2 4500 J00TV	Mylar	0.22µF	50V	±5%	1
C117	CM3 3 3500 K00SV	Mylar	0.033µF	50V	±10%	1
C118	CM1 0 4500 J00TV	Mylar	0.1µF	50V	±5%	1
C119	CM1 5 4500 J00TV	Mylar	0.15µF	50V	±5%	1
C120	CM1 0 4500 J00TV	Mylar	0.1µF	50V	±5%	1
C121	CM3 3 3500 K00SV	Mylar	0.033µF	50V	±10%	1
C122	CM6 8 3500 K00SV	Mylar	0.068µF	50V	±10%	1
C123	CM4 7 3500 K00SV	Mylar	0.047µF	50V	±10%	1
C124	CD2 2 7160 0001V	Electrolytic	220µF	16V		1
C201	CD1 0 5500 0001V	Electrolytic	1µF	50V		1
C202	CC4 7 0500 KD00C	Ceramic	47pF	50V	±10%	1
C203	CP1 0 2101 J003V	Polypropylen	0.001µF	100V	±5%	1
C204	CM3 9 2500 K00SV	Mylar	0.0039µF	50V	±10%	1
C205	CC2 2 1500 KD00C	Ceramic	220pF	50V	±10%	1
C206	CD1 0 6160 0001V	Electrolytic	10µF	16V		1
C207	CM1 0 3500 K00SV	Mylar	0.01µF	50V	±10%	1
C208	CD1 0 5500 0001V	Electrolytic	1µF	50V		1
C209	CM1 2 2500 K00SV	Mylar	0.0012µF	50V	±10%	1
C210	CM3 3 3500 K00SV	Mylar	0.033µF	50V	±10%	1
C211	CM4 7 2500 K00SV	Mylar	0.0047µF	50V	±10%	1
C212	CD1 0 6160 0001V	Electrolytic	10µF	16V		1
C213	CD1 0 6160 0001V	Electrolytic	10µF	16V		1
C214	CC1 0 4500 ZG00C	Ceramic	0.1µF	50V	+80,-20%	1
C215	CM4 7 2500 K00SV	Mylar	0.0047µF	50V	±10%	1
C216	CM2 2 4500 J00TV	Mylar	0.22µF	50V	±5%	1
C217	CM3 3 3500 K00SV	Mylar	0.033µF	50V	±10%	1
C218	CM1 0 4500 J00TV	Mylar	0.1µF	50V	±5%	1
C219	CM1 5 4500 J00TV	Mylar	0.15µF	50V	±5%	1
C220	CM1 0 4500 J00TV	Mylar	0.1µF	50V	±5%	1
C221	CM3 3 3500 K00SV	Mylar	0.033µF	50V	±10%	1
C222	CM6 8 3500 K00SV	Mylar	0.068µF	50V	±10%	1
C223	CM4 7 3500 K00SV	Mylar	0.047µF	50V	±10%	1
C224	CD2 2 7160 0001V	Electrolytic	220µF	16V		1
C301	CD1 0 6160 0001V	Electrolytic	10µF	16V		1
C302	CD1 0 5500 0001V	Electrolytic	1µF	50V		1
C303	CD3 3 7160 0001V	Electrolytic	330µF	16V		1
IC101	4 2069 71700	IC, NE 654				1
IC102	4 2069 71690	IC, NE 652				1
IC201	4 2069 71700	IC, NE 654				1
IC202	4 2069 71690	IC, NE 652				1
Q101	203 5 5083 33165	TR, 2SC 3331 U				1
Q102	203 5 5083 33165	TR, 2SC 3331 U				1
Q201	203 5 5083 33165	TR, 2SC 3331 U				1
Q202	203 5 5083 33165	TR, 2SC 3331 U				1
R101	RD2 4 2251 JM000	Carbon	2.4kΩ	1/4W	±5%	1
R102	RD5 6 2251 JM000	Carbon	5.6kΩ	1/4W	±5%	1
R103	RD6 8 2251 JM000	Carbon	6.8kΩ	1/4W	±5%	1
R104	RD2 2 4251 JM000	Carbon	220kΩ	1/4W	±5%	1
R105	RD1 0 2251 JM000	Carbon	1kΩ	1/4W	±5%	1
R106	RD6 8 2251 JM000	Carbon	6.8kΩ	1/4W	±5%	1
R107	RD2 2 2251 JM000	Carbon	2.2kΩ	1/4W	±5%	1
R108	RD6 8 3251 JM000	Carbon	68kΩ	1/4W	±5%	1
R109	RD5 1 2251 JM000	Carbon	5.1kΩ	1/4W	±5%	1
R110	RD4 7 3251 JM000	Carbon	47kΩ	1/4W	±5%	1
R111	RD1 8 2251 JM000	Carbon	1.8kΩ	1/4W	±5%	1
R112	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R113	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R114	RD4 7 2251 JM000	Carbon	4.7kΩ	1/4W	±5%	1
R115	RD1 2 3251 JM000	Carbon	12kΩ	1/4W	±5%	1
R116	RD7 5 3251 JM000	Carbon	75kΩ	1/4W	±5%	1
R117	RD4 7 3251 JM000	Carbon	47kΩ	1/4W	±5%	1
R118	RD3 9 4251 JM000	Carbon	390kΩ	1/4W	±5%	1
R119	RD3 3 4251 JM000	Carbon	330kΩ	1/4W	±5%	1
R120	RD3 9 4251 JM000	Carbon	390kΩ	1/4W	±5%	1
R121	RD3 3 4251 JM000	Carbon	330kΩ	1/4W	±5%	1
R122	RD8 2 3251 JM000	Carbon	82kΩ	1/4W	±5%	1
R201	RD2 4 2251 JM000	Carbon	2.4kΩ	1/4W	±5%	1
R202	RD5 6 2251 JM000	Carbon	5.6kΩ	1/4W	±5%	1
R203	RD6 8 2251 JM000	Carbon	6.8kΩ	1/4W	±5%	1
R204	RD2 2 4251 JM000	Carbon	220kΩ	1/4W	±5%	1
R205	RD1 0 2251 JM000	Carbon	1kΩ	1/4W	±5%	1
R206	RD6 8 2251 JM000	Carbon	6.8kΩ	1/4W	±5%	1
R207	RD2 2 2251 JM000	Carbon	2.2kΩ	1/4W	±5%	1
R208	RD6 8 3251 JM000	Carbon	68kΩ	1/4W	±5%	1
R209	RD5 1 2251 JM000	Carbon	5.1kΩ	1/4W	±5%	1
R210	RD4 7 3251 JM000	Carbon	47kΩ	1/4W	±5%	1
R211	RD1 8 2251 JM000	Carbon	1.8kΩ	1/4W	±5%	1
R212	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R213	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R214	RD4 7 2251 JM000	Carbon	4.7kΩ	1/4W	±5%	1
R215	RD1 2 3251 JM000	Carbon	12kΩ	1/4W	±5%	1
R216	RD7 5 3251 JM000	Carbon	75kΩ	1/4W	±5%	1
R217	RD4 7 3251 JM000	Carbon	47kΩ	1/4W	±5%	1
R218	RD3 9 4251 JM000	Carbon	390kΩ	1/4W	±5%	1
R219	RD3 3 4251 JM000	Carbon	330kΩ	1/4W	±5%	1
R220	RD3 9 4251 JM000	Carbon	390kΩ	1/4W	±5%	1
R221	RD3 3 4251 JM000	Carbon	330kΩ	1/4W	±5%	1
R222	RD8 2 3251 JM000	Carbon	82kΩ	1/4W	±5%	1
R301	RD8 2 3251 JM000	Carbon	82kΩ	1/4W	±5%	1
R302	RD1 8 3251 JM000	Carbon	18kΩ	1/4W	±5%	1
R303	RH1 0 1501 JZ003	Metal	100Ω	1/2W	±5%	1
R304	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1

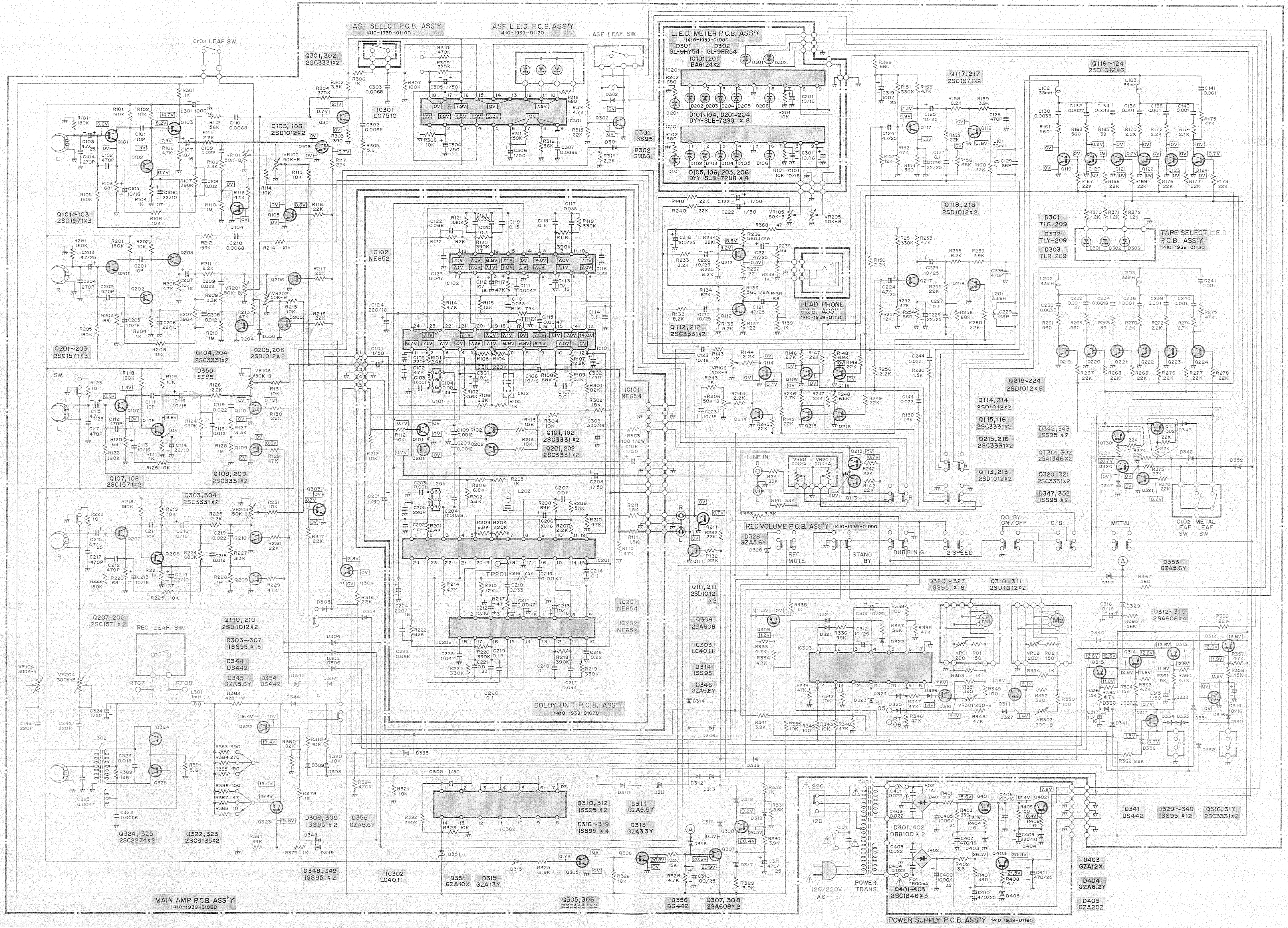
PARTS LIST (Continued)

Ref. No.	Part No.	Description				Q'ty
		L.E.D. METER P.C.B. ASSY				
	141 0 1939 01080	L.E.D. Meter P.C.B. Assy				1
CN05	4 2359 76352	Connector 3P Assy				1
CN06	4 2359 76401	Connector 2P Assy				1
CN07	4 2359 76353	Connector 3P Assy				1
	131 2 6113 48100	Shelter				1
C101	CD1 0 6160 0001V	Electrolytic	10µF	16V		1
C201	CD1 0 6160 0001V	Electrolytic	10µF	16V		1
C301	CD1 0 6160 0001V	Electrolytic	10µF	16V		1
D101	DYY - SLB- 72GG-	L.E.D., SLB 72 GG 4 HL				1
D102	DYY - SLB- 72GG-	L.E.D., SLB 72 GG 4 HL				1
D103	DYY - SLB- 72GG-	L.E.D., SLB 72 GG 4 HL				1
D104	DYY - SLB- 72GG-	L.E.D., SLB 72 GG 4 HL				1
D105	DYY - SLB- 72UR-	L.E.D., SLB 72 UR 4 HL				1
D106	DYY - SLB- 72UR-	L.E.D., SLB 72 UR 4 HL				1
D201	DYY - SLB- 72GG-	L.E.D., SLB 72 GG 4 HL				1
D202	DYY - SLB- 72GG-	L.E.D., SLB 72 GG 4 HL				1
D203	DYY - SLB- 72GG-	L.E.D., SLB 72 GG 4 HL				1
D204	DYY - SLB- 72GG-	L.E.D., SLB 72 GG 4 HL				1
D205	DYY - SLB- 72UR-	L.E.D., SLB 72 UR 4 HL				1
D206	DYY - SLB- 72UR-	L.E.D., SLB 72 UR 4 HL				1
D301	4 2029 72102	L.E.D., GL 9 HY 84				1
D302	4 2029 72101	L.E.D., GL 9 PR 54				1
IC101	4 2069 71830	IC, BA 6124				1
IC201	4 2069 71830	IC, BA 6124				1
R101	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R102	RD6 8 1251 JM000	Carbon	680Ω	1/4W	±5%	1
R201	RD1 0 3251 JM000	Carbon	10kΩ	1/4W	±5%	1
R202	RD6 8 1251 JM000	Carbon	680Ω	1/4W	±5%	1
		REC VOLUME P.C.B. ASSY				
	141 0 1939 01090	REC Volume P.C.B. Assy				1
	141 2 3619 11800	Holder Volume				1
	141 2 8539 48800	Plate Earth Volume				1
CN08	4 2359 75987	Connector 5P Assy				1
VR101	4 2229 73840	Control Volume 50K-A				1
VR201	4 2229 73840	Control Volume 50K-A				1
		ASF SELECT SWITCT P.C.B. ASSY				
	141 0 1939 01100	ASF Select Switch P.C.B. Assy				1
CN03	4 2359 76400	Connector 2P Assy				1
SW01	4 2319 75560	Touch Switch				1
		HEAD PHONE P.C.B. ASSY				
	141 0 1939 01110	Head Phone P.C.B. Assy				1
	4 2359 76380	Jack 3P 6.43				1
CN21	4 2359 76359	Connector 3P Assy				1
		POWER SUPPLY P.C.B. ASSY				
	141 0 1939 01160	Power Surpply P.C.B. Assy				1
T401 ⚠	4 2519 73910	Power Trans				1
F01 ⚠	4 2349 70210	Fuse T800mA				1
F02 ⚠	4 2349 70140	Fuse T1.0A				1
CN04	4 2359 75188	Connector 7P Assy				1
C401	CC2 2 3500 ZG00C	Ceramic	0.022µF	50V	+80,-20%	1
C402	CC2 2 3500 ZG00C	Ceramic	0.022µF	50V	+80,-20%	1
C403	CC2 2 3500 ZG00C	Ceramic	0.022µF	50V	+80,-20%	1
C404	CC2 2 3500 ZG00C	Ceramic	0.022µF	50V	+80,-20%	1
C405	CD1 0 8250 0001V	Electrolytic	1000µF	25V		1
C406	CD1 0 8350 0001V	Electrolytic	1000µF	35V		1
C407	CD4 7 7160 0001V	Electrolytic	470µF	16V		1
C408	CD1 0 7160 0001V	Electrolytic	100µF	16V		1
C409	CD2 2 7100 0001V	Electrolytic	220µF	10V		1
C410	CD4 7 7250 0001V	Electrolytic	470µF	25V		1
C411	CD4 7 7250 0001V	Electrolytic	470µF	25V		1
D401	202 5 1330 01010	Bridge Diode, DBB10C				1
D402	202 5 1330 01010	Bridge Diode, DBB10C				1
D403	202 5 3210 12011	Zener Diode, GZA 12X				1
D404	202 5 3210 08212	Zener Diode, GZA8.2Y				1
D405	202 5 3210 20013	Zener Diode, GZA 20Z				1
Q401	4 2039 70601	TR, 2SC 1846 R				1
Q402	4 2039 70601	TR, 2SC 1846 R				1
Q403	4 2039 70601	TR, 2SC 1846 R				1
R401	RD2 2 A251 JS000	Carbon	2.2Ω	1/4W	±5%	1
R402	RD3 3 A251 JS000	Carbon	3.3Ω	1/4W	±5%	1
R403	RD3 3 1251 JS000	Carbon	330Ω	1/4W	±5%	1
R404	RD1 0 0251 JS000	Carbon	10Ω	1/4W	±5%	1
R405	RD1 5 1251 JS000	Carbon	150Ω	1/4W	±5%	1
R406	RD1 0 0251 JS000	Carbon	10Ω	1/4W	±5%	1
R407	RD3 3 1251 JS000	Carbon	330Ω	1/4W	±5%	1
R408	RD4 7 A251 JS000	Carbon	4.7Ω	1/4W	±5%	1

POINT TO POINT WIRING DIAGRAM


120/220V AC
50/60Hz
220V
120V
VOLTAGE SELECTOR
TRANS
POWER SUPPLY P.C.B.ASS'Y
1410-1939-01160
LINEOUT
LINE IN
(RECORD)
(PLAYBACK)
L
R
MAIN AMP. P.C.B. ASS'Y
1410-1939-01060
DOLBY UNIT P.C.B. ASS'Y
1410-1939-01070
REC MUTE
SYNCHRO
SPEED
DOLBY NR
TAPE SEL
HEAD PHONE P.C.B. ASS'Y
1410-1939-01110
PHONES
A.S.F. PLUNGER
ASF
ASF SELECT SW. P.C.B. ASS'Y
1410-1939-01100
DECK 1 TERMINAL P.C.B. ASS'Y
1410-1939-01140
ASF SW.
MUTE SW.
DUMMY ERASE HEAD
PLAY HEAD
ASF L.E.D. P.C.B. ASS'Y
1410-1939-01120
CASSETTE MOTOR
CrO2 SW.
POWER SW.
0.01/400
DECK 2 TERMINAL P.C.B. ASS'Y
1410-1939-01150
QUE SW
ERASE HEAD
R/P HEAD
MUTE SW.
OSC SW.
TAPE SELECT L.E.D. P.C.B. ASS'Y
1410-1939-01130
CASSETTE MOTOR
CrO2 SW.
METAL SW.
REC VOLUME P.C.B. ASS'Y
1410-1939-01090
L.E.D. METER P.C.B. ASS'Y
1410-1939-01080

SCHEMATIC DIAGRAM


ASF SELECT P.C.B. ASS'Y 1410-1939-01100
ASF L.E.D. P.C.B. ASS'Y 1410-1939-01120
ASF LEAF SW.
CrO2 LEAF SW.
L.E.D. METER P.C.B. ASS'Y 1410-1939-01080
HEAD PHONE P.C.B. ASS'Y 1410-1939-01110
TAPE SELECT L.E.D. P.C.B. ASS'Y 1410-1939-01130
DOLBY UNIT P.C.B. ASS'Y 1410-1939-01070
REC VOLUME P.C.B. ASS'Y 1410-1939-01090
LINE IN
REC LEAF SW.
MAIN AMP P.C.B. ASS'Y 1410-1939-01060
POWER SUPPLY P.C.B. ASS'Y 1410-1939-01160
POWER TRANS
120/220V AC
DOLBY ON/OFF
METAL
CrO2 LEAF SW
METAL LEAF SW
REC MUTE
STAND BY
DUBBING
2 SPEED

PRODUCT SAFETY NOTICE

Each precaution in this manual should be followed during servicing. Components identified with the IEC symbol ⚠ in the parts list and the schematic diagram designate components in which safety can be of special significance. When replacing a component identified with ⚠, use only the replacement parts designated, or parts with the same ratings of resistance, wattage or voltage that are designated in the parts list in this manual.

Leakage-current or resistance measurements must be made to determine that exposed parts are acceptably insulated from the supply circuit before returning the product to the customer.

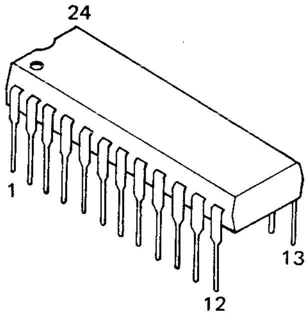
NOTES:

1. All resistors values are indicated in "ohm" ($K=10^3$, $M=10^6$).
2. All capacitors values are indicated in "μF" ($P=10^{-12}$).
3. All voltages indicated on the schematics are measured under the following conditions.
   a. Use a V.T.V.M.
   b. All voltages ±10% with respect to chassis ground
   c. No signals at input terminals
   d. AC input at 220 volts 50 Hz
4. This is a basic schematic diagram.

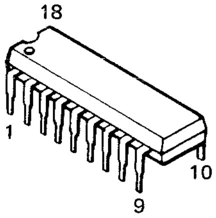
Because Fisher products are subject to continuous improvement, Fisher Corporation reserves the right to make any changes or modifications without notice.

SEMICONDUCTOR LEAD IDENTIFICATION

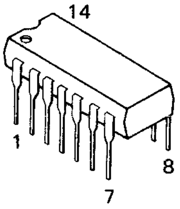
INTEGRATED CIRCUITS



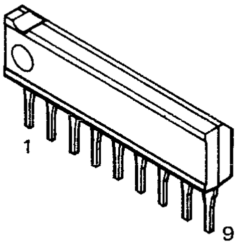
- NE 654



- LC7510
- NE 652

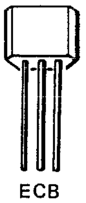


- LC 4011

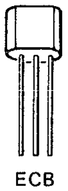


- BA 6124

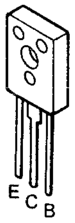
BI-POLAR TRANSISTORS



- 2SA 608
- 2SC 1571
- 2SC 2274
- 2SC 3331

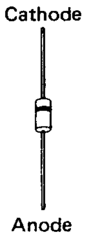


- 2SA 1346
- 2SC 3135
- 2SD1012

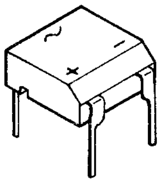


- 2SC 1846

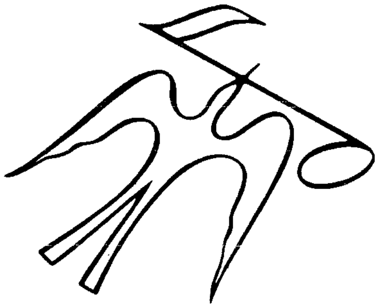
DIODES


Cathode
Anode

- 1SS 95
- GMA 01
- GZA 3.3Y
- GZA 5.6Y
- GZA 8.2Y
- GZA 10X
- GZA 12X
- GZA 13Y
- GZA 20Z



- DBB 10C



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